CONTROL MEMORY TEST

This program tests the ability of the control memory section to accept and retain various bit configurations. This is accomplished by loading and evaluating a series of patterns which range in complexity from the simplest to two patterns generating the maximum amount of noise in the core sense windings. These patterns included worst pattern, a complement worst pattern, a random number generator, a read/write test, and a pattern test consisting of hold 1's, hold 0's, alternate 1's and 0's and alternate 0's and 1's. Each pattern is loaded and evaluated within a subroutine which is under the control of an executive routine. In addition, a Hammer Test is included which is also under control of the executive.

The Control Memory Test is written from either a 128 or 256 word control memory. The Control Memory Size table shows the appropriate size index that must be entered into AL before the program is initiated.

CONTROL MEMORY SIZE TABLE

Control Memory Size	Set AL bits 2-0 to
128	0
256	1

The operator has the option of selecting either or both a computer console error display or an error typeout. If PROGRAM STOP 0 is set and an error is detected, the test will stop and display the correct pattern in AU and the incorrect pattern in AL. Upon restarting, the test will stop with the failing address in AL. If PROGRAM SKIP 4 is not set Typeout Subroutines will provide the operator with a typeout of the status of the Control Memory Test. If an error is detected, and PROGRAM SKIP 4 is not set, the failing address and the correct and incorrect patterns will be buffered out. All messages are buffered out in field data code via channel 0.

The Control Memory Test may be run separately or as a part of the Integrated Memory test. If it is run separately PROGRAM SKIP 2 must be set to remain in the CONTROL MEMORY TEST.
The following is the operating procedure for the CONTROL MEMORY TEST.

a. Disconnect the RTC.

b. Load the CONTROL MEMORY TEST PROGRAM or the INTEGRATED MEMORY TEST PROGRAM. The jumps and stops for this program are as shown in the following table:

PROGRAM SWITCH	PROGRAM ACTION
PROGRAM SKIP 0	Set to recycle a failing test subroutine
PROGRAM SKIP 2	Set to remain in the Control Memory test
PROGRAM SKIP 4	Set to supress typeouts
PROGRAM STOP 0	Set to computer console error display
PROGRAM STOP 1	Set to end test after current cycle
PROGRAM STOP 2	Set to stop after error typeout
PROGRAM STOP 3	Set to end test after a selected number (the number -1 in address NUMB) of cycles of the Control Memory Test. This stop is used with typeouts only.

c. Set PROGRAM SKIPS and STOPS as desired according to the above table.

d. Master Clear the Computer.

e. Set AL bits 2-0 to the appropriate size index as found in the Control Memory Size table.

f. Set the 1232/1532 channel number in AL bits 6 to 3.

g. Set AL bit 8 if the I/O Console is a 1532.

h. Set AL bits 17-15 as follows:

Set bit 17 if computer is in 1218 normal mode
Set bit 16 if computer is in 1218 NTDS mode
Set bit 15 if computer is in 1219 normal mode

i. Insert (if necessary) the plug-in printed wiring assembly 7104010 in the location specified as follows:

A4A1J5G if computer is in 1218 normal mode
A4A1J5F if computer is in 1218 NTDS mode
A4A1J4G if computer is in 1219 normal mode

j. Set P=3700.

k. Start the Computer.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 668 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: SIZE - CONTROL MEMORY SIZE DETERMINATION

DECK IDENTIFIER: FACT

CS-1 LABEL: SIZE KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 26

DESCRIPTION:

This routine, SIZE, takes a size index that is manually entered into AL and uses it to set the upper limit of control memory and to initialize the routine, CHECK, that checks for the areas of main memory that are not to be tested.

This routine stores the 1232/1532 channel number in all I/O instructions. Also, the terminal BCW's for output and external function instructions are setup for either N or N+1 termination.

This routine is run only once and is not referenced by subsequent routines.

SIZE saves the index in AL then adds the index to the base address for the control memory size. This modified address is used to enter the appropriate value for control memory size into AL and store it at address PAR1. A similar procedure is used to store the appropriate instruction in routine CHEK.

TITLE: SIZE - CONTROL MEMORY SIZE DETERMINATION

INPUT PARAMETERS (Listed Sequentially):

AL is entered manually before initialing program

OUTPUT PARAMETERS (Listed Sequentially):

PAR1
CHEK4

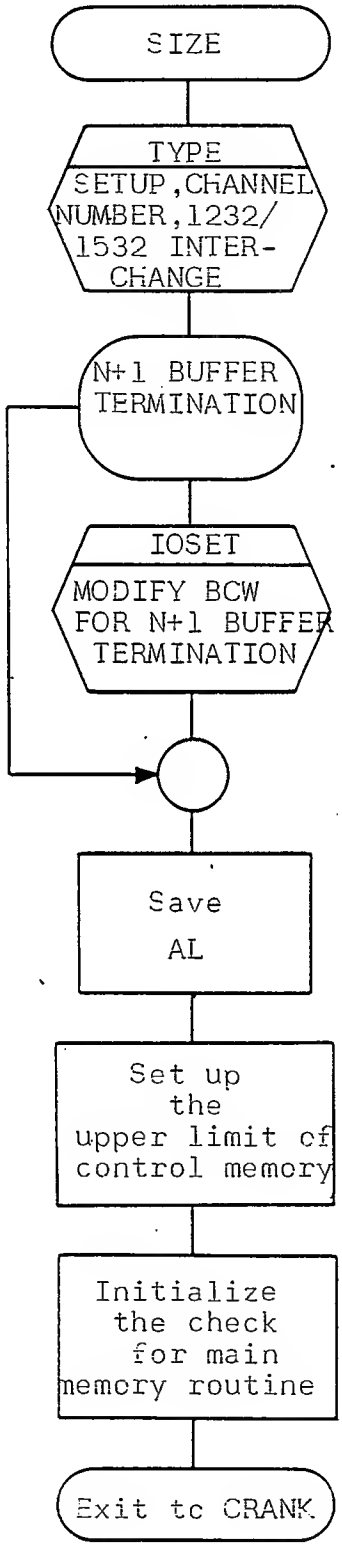
ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

TYPE
IOSET
CRANK

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:


SIZE
TYPE
SETUP,CHANNEL NUMBER,1232/ 1532 INTER-CHANGE
N+1 BUFFER TERMINATION
IOSET
MODIFY BCW FOR N+1 BUFFER TERMINATION
Save AL
Set up the upper limit of control memory
Initialize the check for main memory routine
Exit tc CRANK

SIZE

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 671	REVISION 1

SPECIFICATION SYMBOL
SB-10163

TITLE: CRANK - 1219B CONTROL MEMORY TEST MONITOR

DECK IDENTIFIER: FACT

CS-1 LABEL: CRANK KEY: _____ IS LABEL DUPLICATE? NO

PROGRAMMER: HWM modified by CRB DATE: 23 Jan. 69

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 34

DESCRIPTION:

This routine, CRANK, monitors the 1219B Control Memory Test.

CRANK is referenced by routines TEST and FLUSH.

PROGRAM SKIP 4 is referenced when CRANK is entered. If not set, the I/O console is turned on and CONTROL MEMORY TEST is typed. It then exits to TRACK. If SKIP 4 is set, TRACK is entered. The number of cycles completed by Control Memory Test is referenced. If 10 cycles are not completed, the program exits to TEST. If 10 cycles are completed, the count is cleared and PROGRAM SKIP 4 is referenced. If set, the program continues without typeouts. If SKIP 4 is not set, a flag is checked to determine if any errors occurred during the test. If no errors occurred, OK, END CYCLES is printed and the program continues. If errors occurred, RECYCLE is printed, the error flag is cleared, and the program continues. PROGRAM STOP 3 is referenced. If it is set, TEST has ended. If it is not set, PROGRAM SKIP 2 is referenced. If it is set, exit to TRACK. If it is not set, exit to INTEGRATED EXECUTIVE.

TITLE: CRANK - 1219B CONTROL MEMORY TEST MONITOR

INPUT PARAMETERS (Listed Sequentially):

BAER

OUTPUT PARAMETERS (Listed Sequentially):

BUFFER PC
BUFFER MEM-MEMO+3
BUFFER END-END+5
BUFFER BUN-BUN+3

ABNORMAL EXITS (Listed Sequentially):

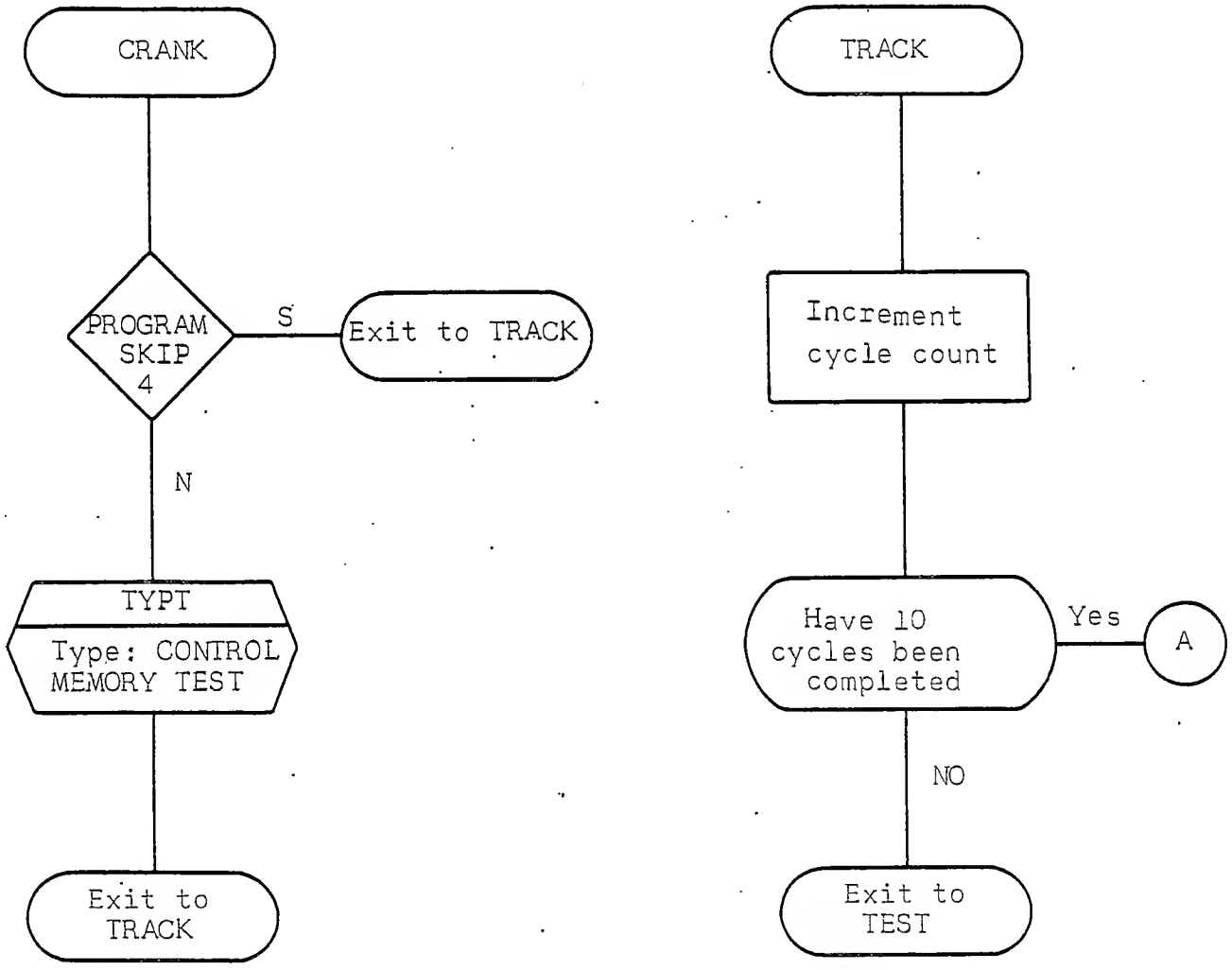
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

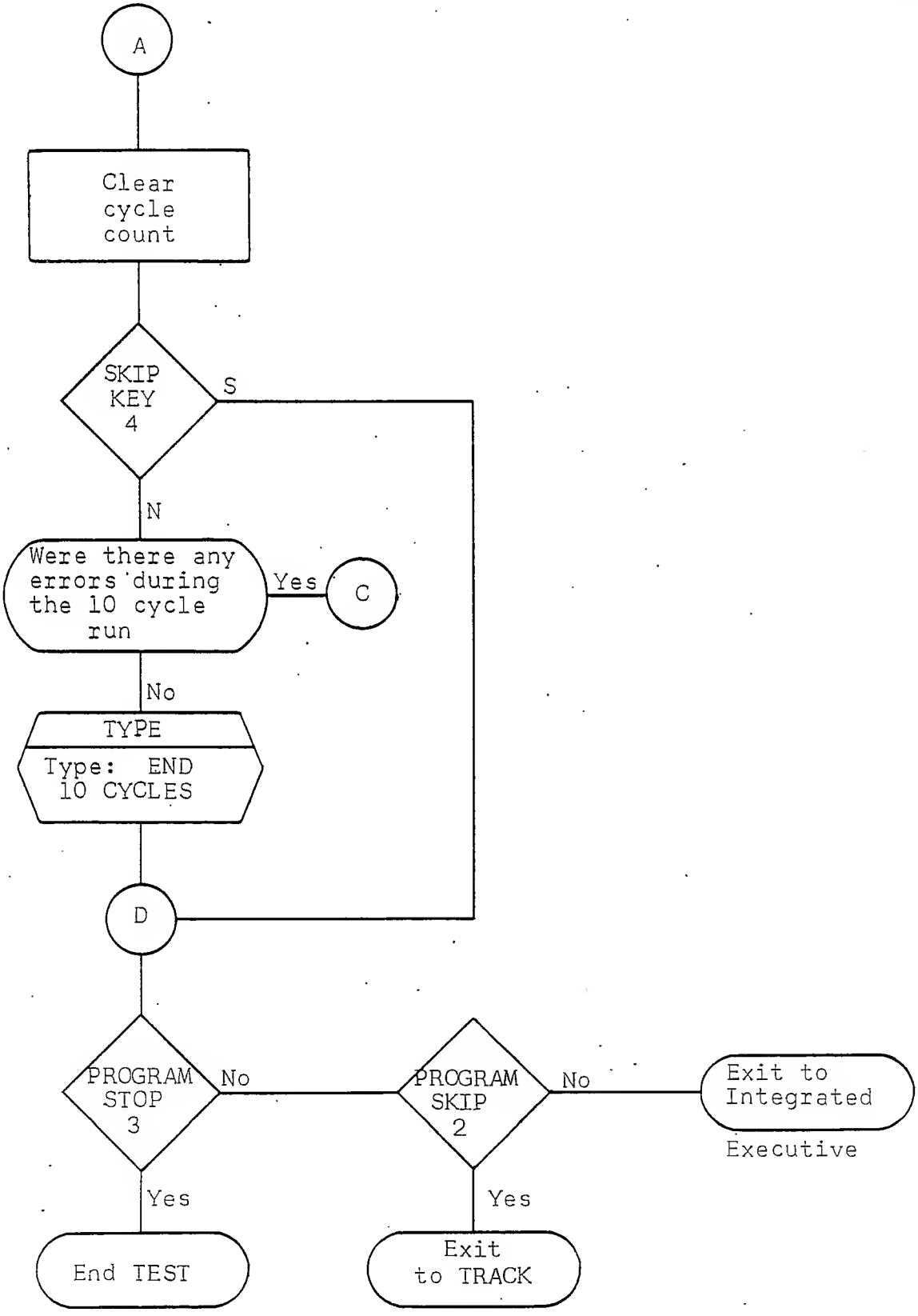
TEST
TYPT

SYSTEM DATA REFERENCES:

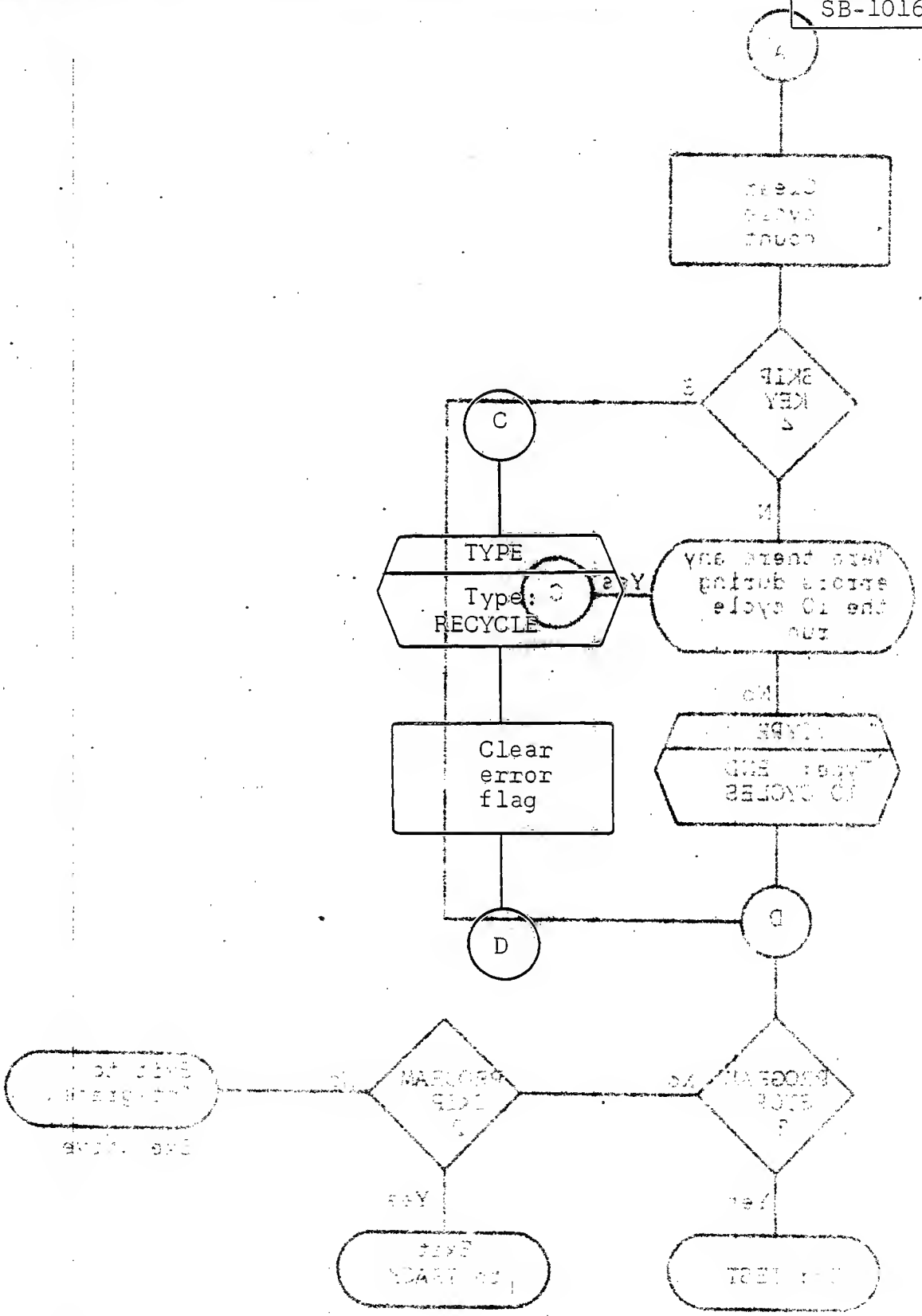
ALARMS AND/OR REMARKS:

PROGRAM SKIP 4- set to suppress typecuts
PROGRAM STOP 3- set to end test
PROGRAM SKIP 2- set to remain in the Control Memory Test


CRANK
PROGRAM SKIP 4
S
Exit to TRACK
N
TYPT
Type: CONTROL MEMORY TEST
Exit to TRACK
TRACK
Increment cycle count
Have 10 cycles been completed
Yes
A
NO
Exit to TEST


A
Clear cycle count
SKIP KEY 4
S
N
Were there any errors during the 10 cycle run
Yes
C
No
TYPE
Type: END 10 CYCLES
D
PROGRAM STOP 3
No
PROGRAM SKIP 2
No
Exit to Integrated Executive
Yes
Yes
End TEST
Exit to TRACK

SPECIFICATION SYMBOL
SB-10163



UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 676 | REVISION —

SPECIFICATION SYMBOL SB-10163

TITLE: ERROUT - ERROR TYPEOUT

DECK IDENTIFIER: FACT

CS-1 LABEL: ERROUT KEY: IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF 1_4 OUTPUT INSTRUCTIONS: 85

DESCRIPTION:

This subroutine, ERROUT, types out the following error indication:

ERROR

1st ADDRESS	LAST ADDRESS	CORRECT	INCORRECT
XXXXXX	XXXXXX	XXXXXX	XXXXXX

After the typeout PROGRAM STOP 2 is referenced for the end of the Control Memory test. This routine, ERROUT, is referenced by the following routines: PROOF, WPI, CWP1, and RW.

Upon entering ERROUT the current ICR is stored and reset to 2. Then the contents B2 and the output buffer locations are stored. An error flag is set. The typeout is completed in the format shown above and PROGRAM STOP 2 is referenced for end of test. The ICR, B2, and the output buffer locations are restored and an exit is made from ERROUT.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 677 | REVISION C

SPECIFICATION SYMBOL
SB-1C163

TITLE: ERROUT - ERROT TYPEOUT

INPUT PARAMETERS (Listed Sequentially):

HERE
THERE
DIP
DIP+1

OUTPUT PARAMETERS (Listed Sequentially):

BUFFER RUE - TRUE+11
BAER
BUFFER BUN - BUN+3
DIP
DIP+1

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

TYPT
CRANK

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

PROGRAM STOP 2 - set to stop after error typeout

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 679 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: TYPE - SETUP CHANNEL NUMBER, 1232/1532 INTERCHANGE

DECK IDENTIFIER: FACT

CS-1 LABEL: TYPE KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: TLR DATE: 8 December 1967

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 43

DESCRIPTION:

This subroutine inserts the 1232/1532 channel number in all I/O instructions. It also modifies the TYPT and TYPC subroutines so as to accept either 1232 or 1532 coded data.

TITLE: TYPE

INPUT PARAMETERS (Listed Sequentially):

ALPARM - Initial AL input parameter.

OUTPUT PARAMETERS (Listed Sequentially):

I$1 T$$1
I$2 T$$2
T$3 T$$3
I$4 T$$4

} I/O instructions with channel number inserted

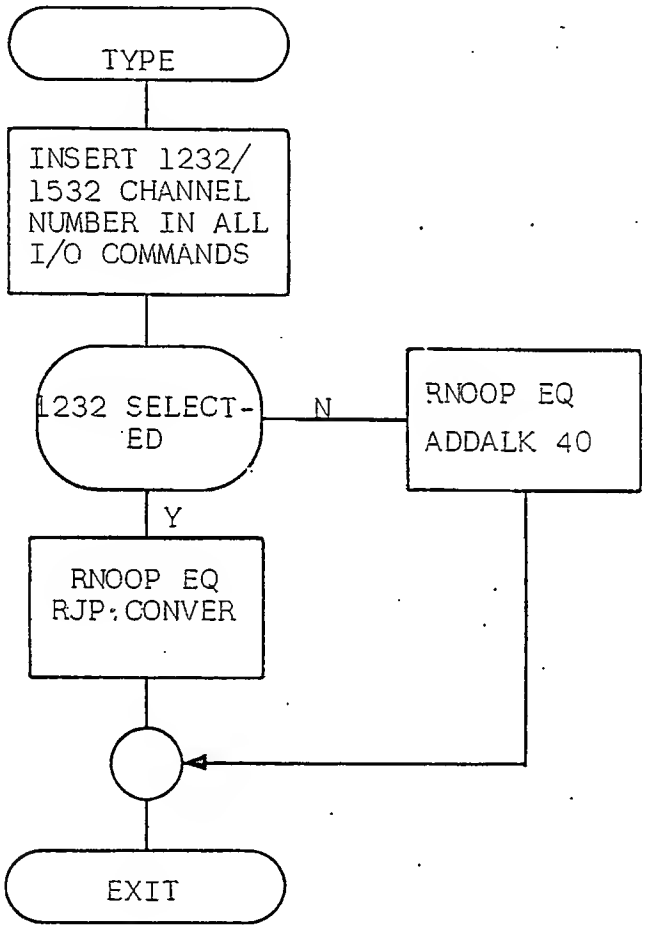
RNOOP { RJP - CONVER if 1232 selected.
ADDALK -.40 if 1532 selected.

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:


TYPE
INSERT 1232/ 1532 CHANNEL NUMBER IN ALL I/O COMMANDS
1232 SELECT-ED
N
RNOOP EQ ADDALK 40
Y
RNOOP EQ RJP:CONVER
EXIT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 682	REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: IOSET

DECK IDENTIFIER: IOSET

CS-1 LABEL: IOSET KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: TLR DATE: 8 December 1967

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 14

DESCRIPTION:

This subroutine modifies output and external function buffer for N+1 termination.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

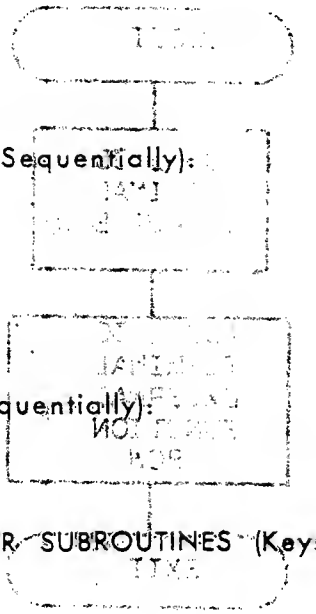
SHEET 683 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: IOSET

INPUT PARAMETERS (Listed Sequentially):

T$1+2
T$2+2



OUTPUT PARAMETERS (Listed Sequentially):

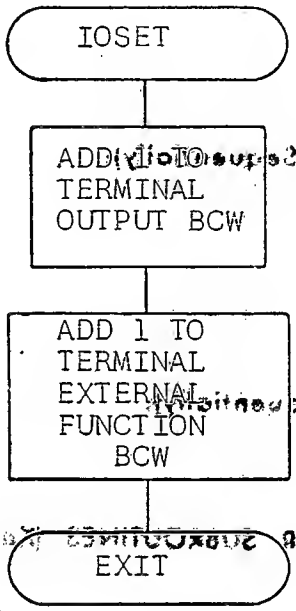
T$1+1
T$2+1

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:


IOSET
ADD 1 TO TERMINAL OUTPUT BCW
ADD 1 TO TERMINAL EXTERNAL FUNCTION BCW
EXIT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 685 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: CHEK - CHECK FOR MAIN MEMORY

DECK IDENTIFIER: FACT

CS-1 LABEL: CHEK KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 20

DESCRIPTION:

This subroutine, CHEK, checks the address to be tested, the current value of PAR, to determine if it is in main memory. If it is in main memory appropriate modifications are made on the address (PAR) and an exit is made from this subroutine, CHEK.

This subroutine, CHEK, is referenced by the following routines: PROOF, TEST, HD1, HALT HALTO, WP1, CWP1, RW1 and FLUSH1.

If CHEK has been modified for the 128 Control Memory size the current address, PAR, is compared to 177_8. If not equal an exit is made from CHEK. If equal, PAR is decremented by 100_8 and an exit is made from CHEK. If CHEK has not been modified for 128 Control Memory PAR is compared to 577_8. If equal, PAR is decremented by 100_8 and an exit is made from CHEK. If not equal, PAR is compared to 377_8. If equal, PAR is decremented by 100_8 and an exit is made from CHEK. If not equal PAR is compared to 177_8. If not equal an exit is made from CHEK. If equal, PAR is decremented by 100_8 and an exit is made from CHEK.

TITLE: CHEK - CHECK FOR MAIN MEMORY

INPUT PARAMETERS (Listed Sequentially):

PAR
CHEK 4

OUTPUT PARAMETERS (Listed Sequentially):

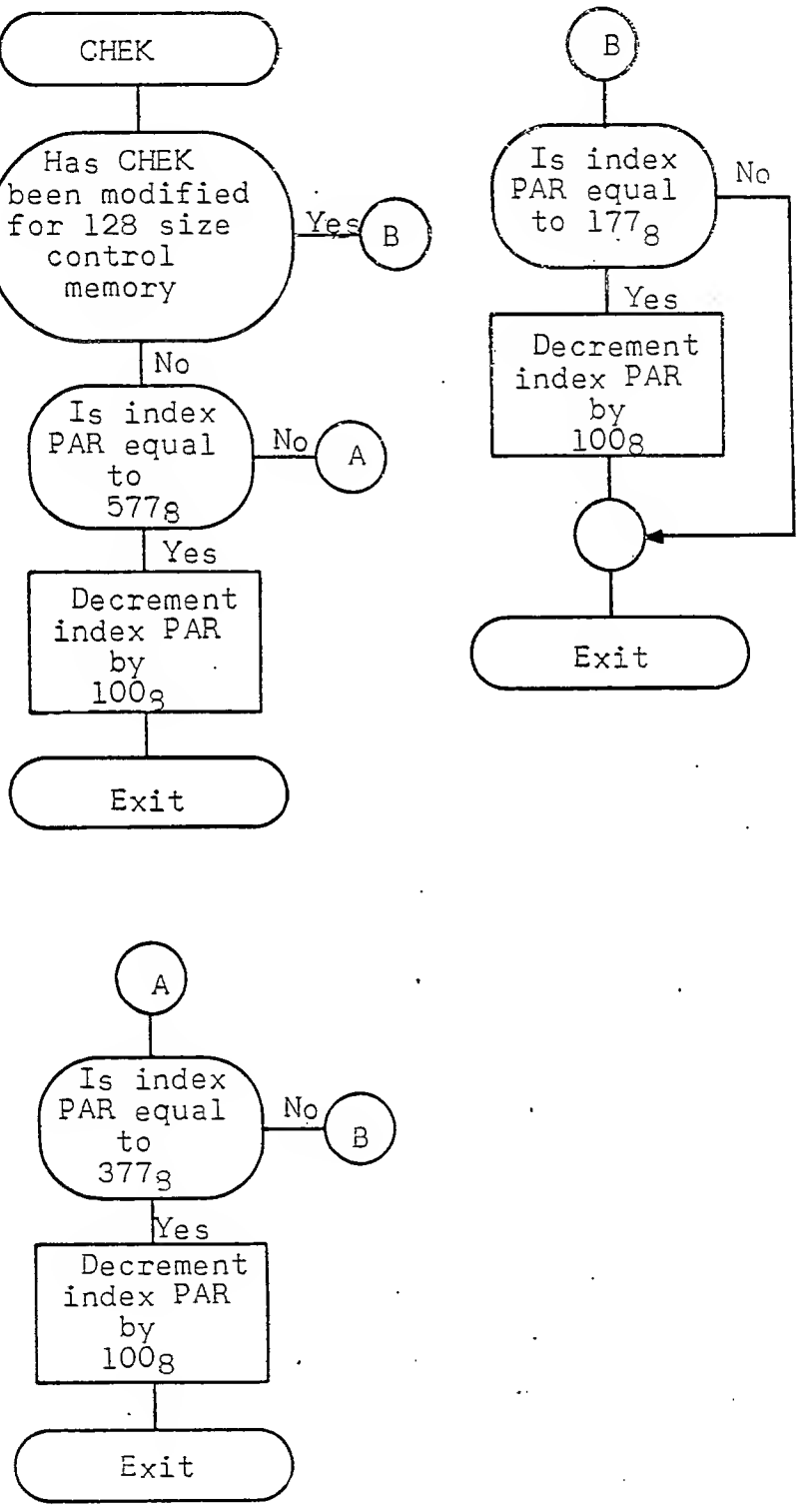
PAR

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:



CHEK- CHECK FOR MAIN MEMORY

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 688 | REVISION

SPECIFICATION SYMBOL
SB-10163

TITLE: PROOF - CONTINUE ERROR CHECK, TYPEOUT

DECK IDENTIFIER: FACT

CS-1 LABEL: PROOF KEY: IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLF DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 14

DESCRIPTION:

This subroutine, PROOF, continues the error check and initiates the error typeout whenever an error typeout is wanted in routines TEST, HD1, HALT and HALTO.

Whenever an error occurs in any of the higher level routines and an error typeout is wanted this routine, PROOF, continues to check the following addresses for incorrect contents. It then indicates an error typeout indicating the correct and incorrect test pattern and the inclusive consecutive addresses that contain incorrect test patterns. Upon completion of the error typeout, control is returned to the referencing routine.

PROGRAM DATA PAGE (Cont)

TITLE: PROOF - CONTINUE ERROR CHECK, TYPEOUT

INPUT PARAMETERS (Listed Sequentially):

PAR

OUTPUT PARAMETERS (Listed Sequentially):

THERE

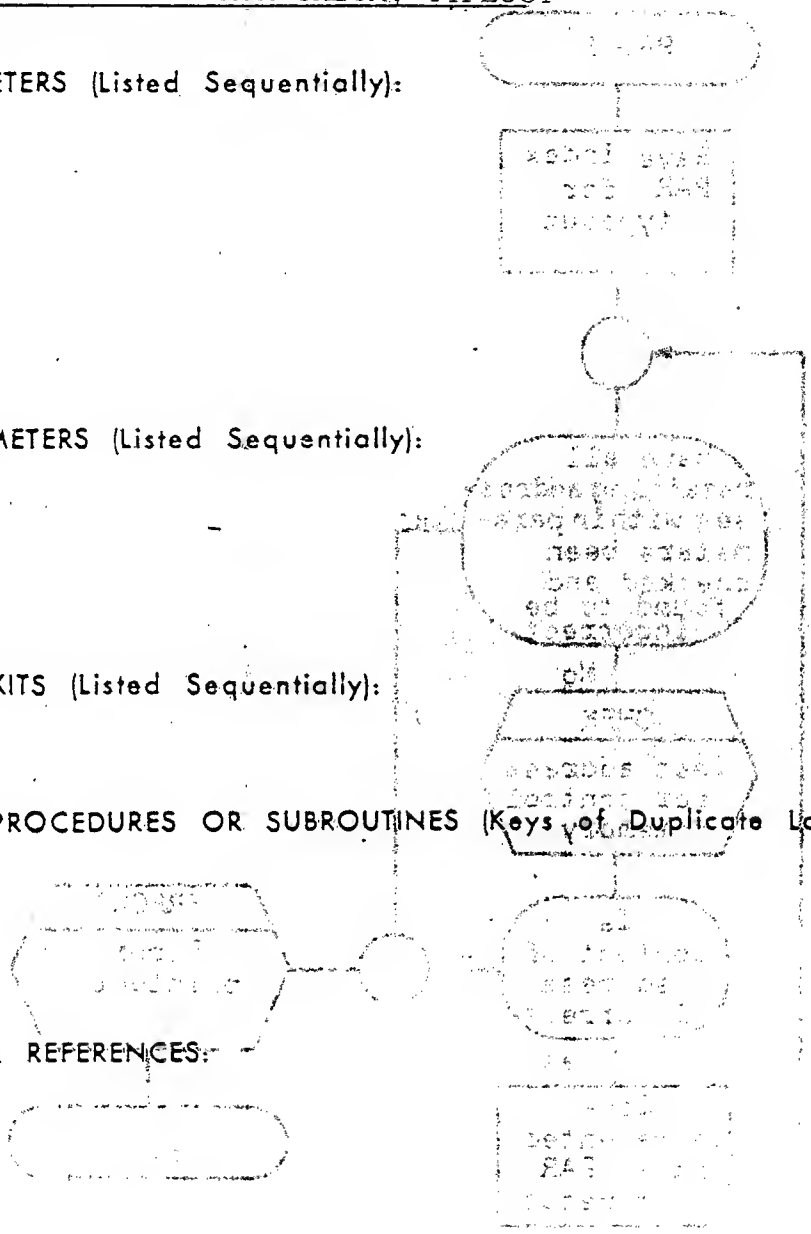
ABNORMAL EXITS (Listed Sequentially):

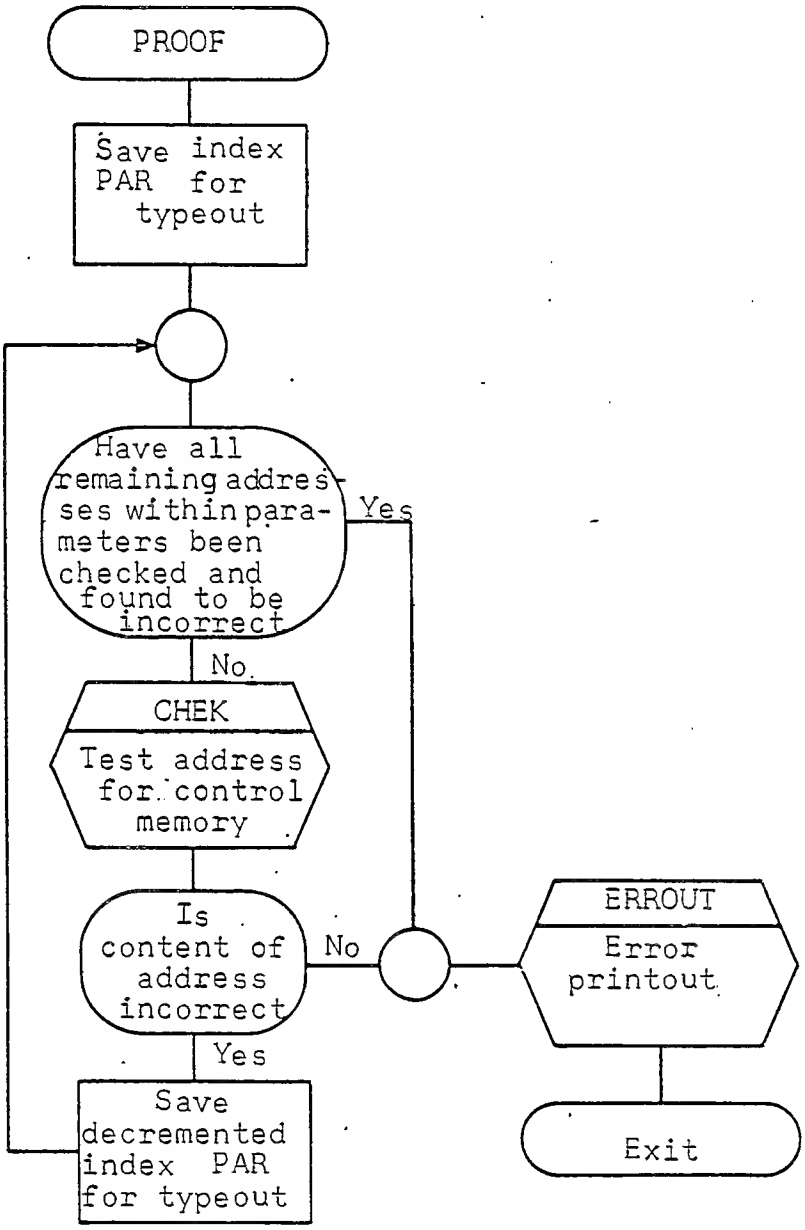
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

ERROUT
CHEK

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:





PROOF - CONTINUE ERROR CHECK, TYPEOUT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 691 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: TEST - HOLD ZEROES TEST

DECK IDENTIFIER: FACT

CS-1 LABEL: TEST KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 33

DESCRIPTION:

This routine, TEST, checks the ability of control memory to hold zeroes.

This routine is referenced by routines CRANK and FLUSH.

Control memory is cleared to all 0's. At the completion of the clearing, the content of each address is entered into AL and checked. If AL contains all 0's the next sequential address is checked. If it contains any improper information, the incorrect information is entered into AL, AU remains cleared which is the correct information. If PROGRAM STOP 0 is set the routine stops and the display may be evaluated. Upon restarting with PROGRAM STOP 0 set, the failing address will be displayed in AL and the routine stops. If PROGRAM STOP 0 is not set, or upon restarting, PROGRAM SKIP 4 is referenced. If it is not set an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set, the test for holding zeroes will recycle; if not set, the test will continue. Upon successful completion of the test an exit is made to routine HD1.

TITLE: TEST - HOLD ZEROES TEST

INPUT PARAMETERS (Listed Sequentially):

PAR1

TEST PATTERN
PAT 000000

OUTPUT PARAMETERS (Listed Sequentially):

PAR
DIP
DIP+1
HERE

ABNORMAL EXITS (Listed Sequentially):

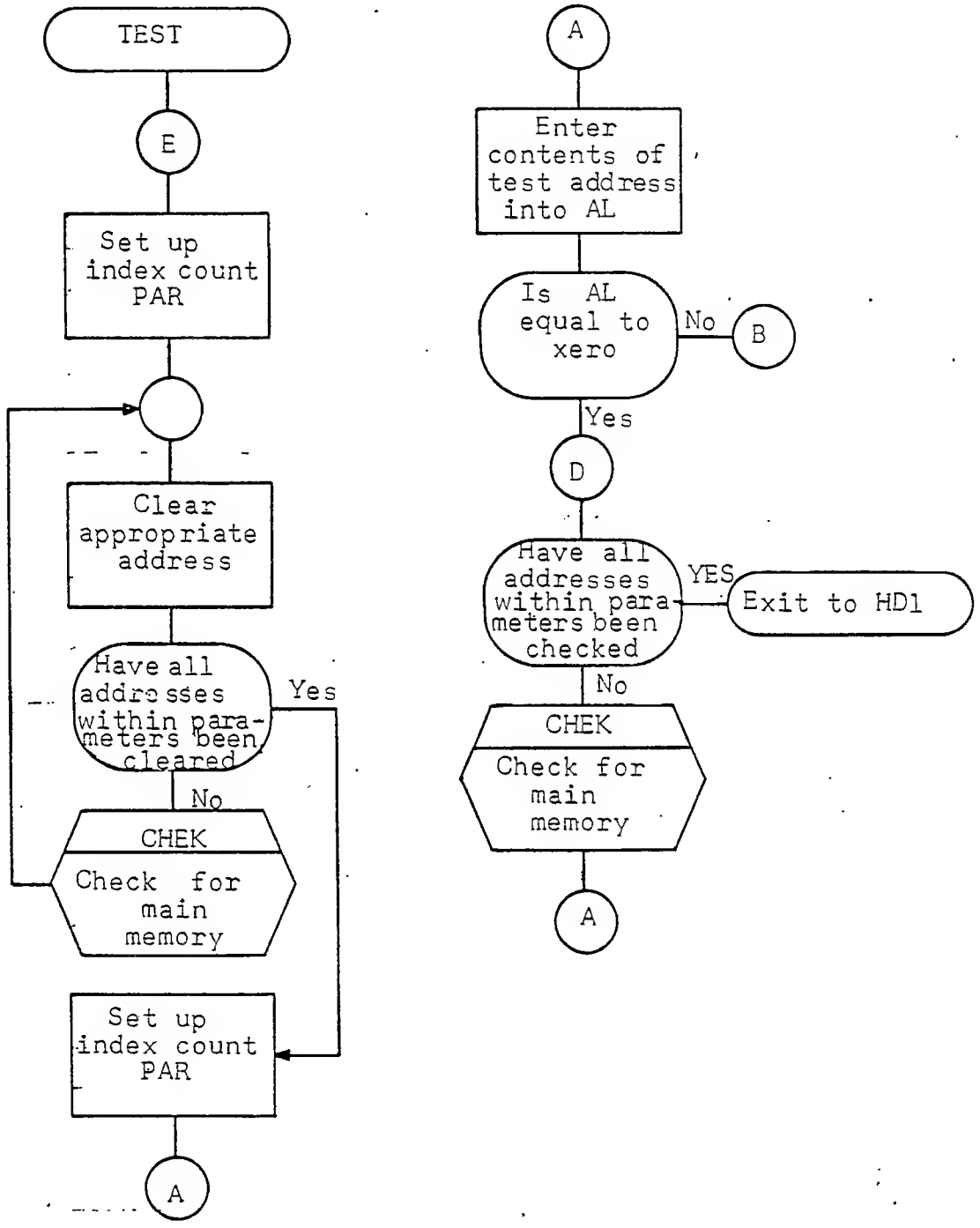
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

CHEK
PROOF
HD1

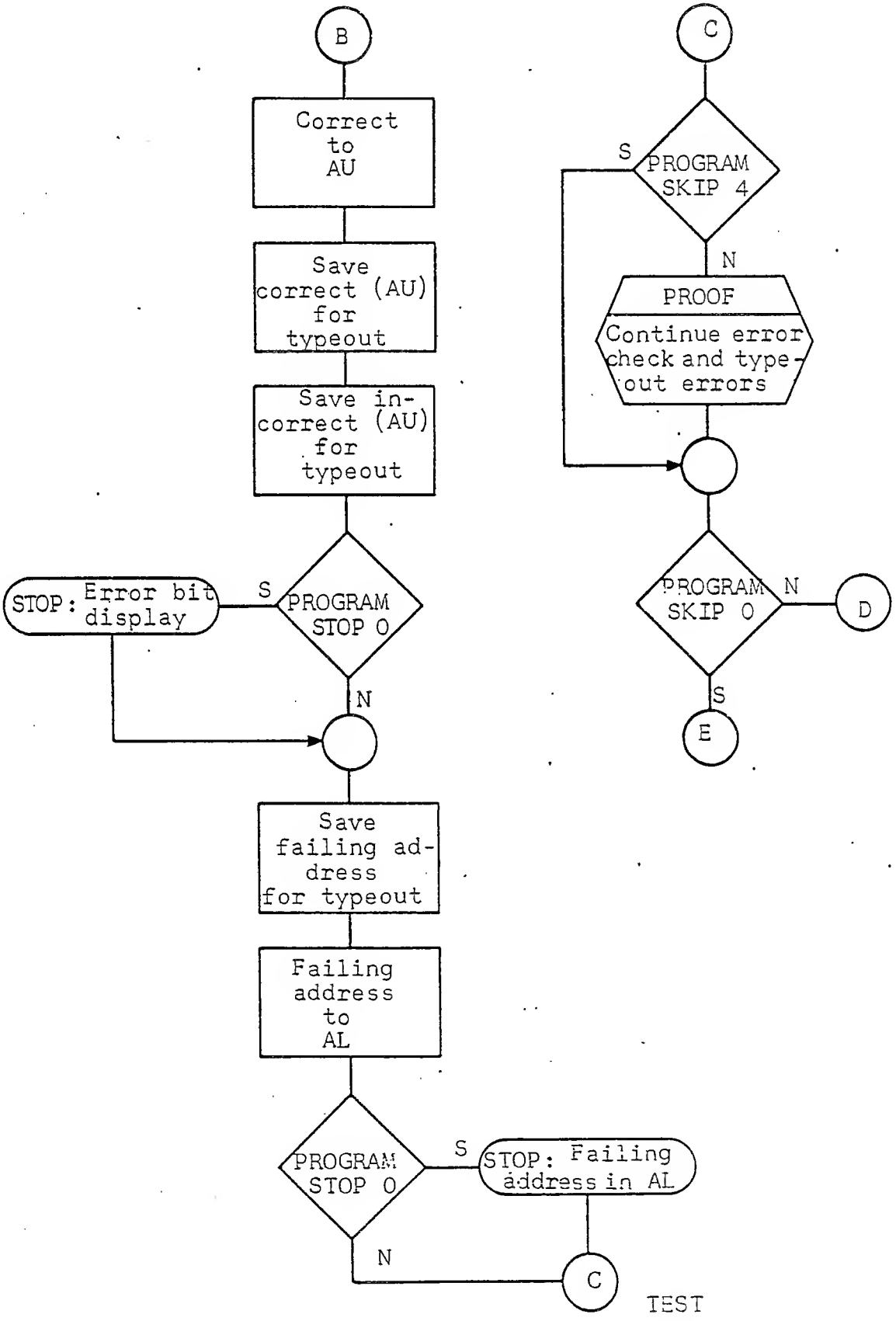
SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

ERROR DISPLAYS
1st PROGRAM STOP 0 - correct information in AU (cleared) incorrect information in AL
2nd PROGRAM STOP 0 - failing address in AL
PROGRAM SKIP 4 - not set for error typeout
set to suppress typeout
PROGRAM SKIP 0 - set to recycle hold zeroes test
not set to continue test


TEST
E
Set up index count PAR
Clear appropriate address
Have all addresses within parameters been cleared
Yes
No
CHEK
Check for main memory
Set up index count PAR
A
A
Enter contents of test address into AL
Is AL equal to xero
No
B
Yes
D
Have all addresses within parameters been checked
YES
Exit to HD1
No
CHEK
Check for main memory
A

TEST


B
Correct to AU
Save correct (AU) for typeout
Save incorrect (AU) for typeout
PROGRAM STOP 0
S
STOP: Error bit display
N
Save failing address for typeout
Failing address to AL
PROGRAM STOP 0
S
STOP: Failing address in AL
N
C
C
S
PROGRAM SKIP 4
N
PROOF
Continue error check and type-out errors
PROGRAM SKIP 0
N
D
S
E

TEST

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 695 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: HD1 - HOLD ONES

DECK IDENTIFIER: FACT

CS-1 LABEL: HD1 KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by FLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 35

DESCRIPTION:

This routine, HD1, checks the ability of the control memory to receive and retain all ones.

This routine is entered from routine TEST.

Control memory is loaded with all ones (777777). When the load is completed, the content of each sequential address is entered into AL and checked for validity. If the contents are incorrect, AU is entered with the correct information (the incorrect being in AL) and PROGRAM STOP 0 is checked. If set, the subroutine stops and the display may be evaluated. Upon restarting, AL is entered with the failing address and, if PROGRAM STOP 0 is still set, the subroutine stops for the address display. If PROGRAM STOP 0 is not set, or upon restarting, PROGRAM SKIP 4 is referenced. If it is not set an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set, HD1 will recycle; if not set, the test will continue. Upon successful completion of HD1, an exit is made to routine HALT.

TITLE: HD1 - HOLD ONES

INPUT PARAMETERS (Listed Sequentially):

PAR1	TEST PATTERN
PAR	PAT1 777777

OUTPUT PARAMETERS (Listed Sequentially):

DIP
DIP+1
HERE

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

CHEK
PROOF
HALT

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

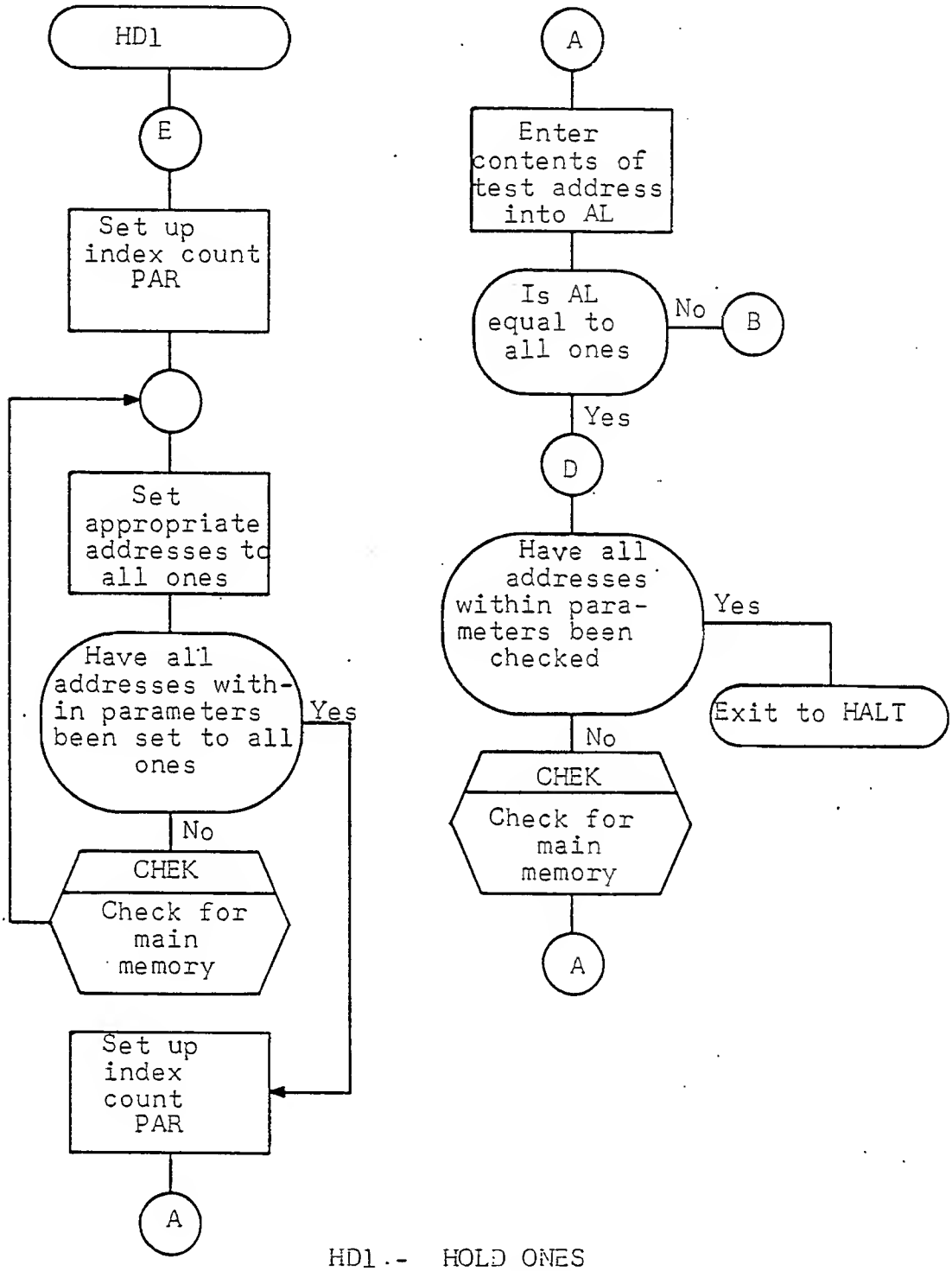
ERROR DISPLAYS

1st PROGRAM STOP 0 - correct information in AU (777777) incorrect information in AL

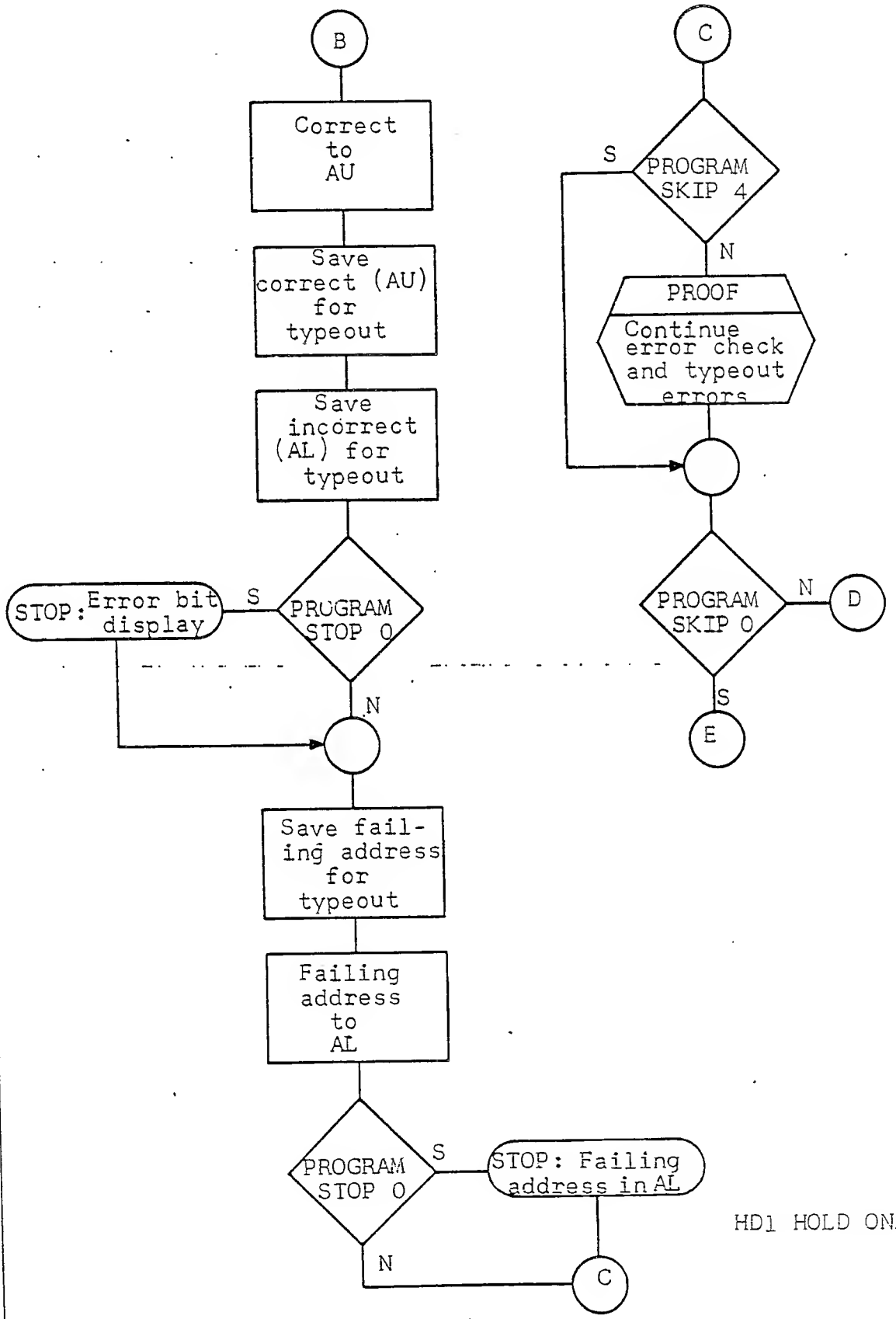
2nd PROGRAM STOP 0 - failing address displayed in AL

PROGRAM SKIP 4 - not set for error typeout
set to suppress error typeout

PROGRAM SKIP 0 - not set to continue routine HD1
set to recycle routine HD1



HD1 - HOLD ONES



HD1 HOLD ONES

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 699 | REVISION —

SPECIFICATION SYMBOL
SP-10163

TITLE: HALT - HOLD ALTERNATE ONES AND ZEROES

DECK IDENTIFIER: FACT

CS-1 LABEL: HD1 KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 35

DESCRIPTION:

This routine, HALT, checks the ability of the control memory to receive and retain a pattern of alternate ones and zeroes (525252).

This routine is entered from routine HD1.

Control memory is loaded with alternate ones and zeroes (525252). When the load is completed, the content of each sequential address is entered into AL and checked for validity. If the contents are incorrect AU is entered with the correct information (the incorrect being in AL) and PROGRAM STOP 0 is checked. If set, the subroutine stops and the display may be evaluated. Upon restarting, AL is entered with the failing address and, if PROGRAM STOP 0 is still set, the subroutine stops for address display. If PROGRAM STOP 0 is not set, or upon restarting, PROGRAM SKIP 4 is referenced. If it is not set an error typeout will occur. After the typeout, of if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set, HALT will recycle; if not set, the test will continue. Upon successful completion of HALT, an exit is made to routine HALTO.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 700 | REVISION —

SPECIFICATION SYMBOL
S3-10163

TITLE: HALT - HOLD ALTERNATE ONES AND ZEROES

INPUT PARAMETERS (Listed Sequentially):

PAR	TEST PATTERN
PAR1	525252

OUTPUT PARAMETERS (Listed Sequentially):

DIP
DIP+1
HERE

ABNORMAL EXITS (Listed Sequentially):

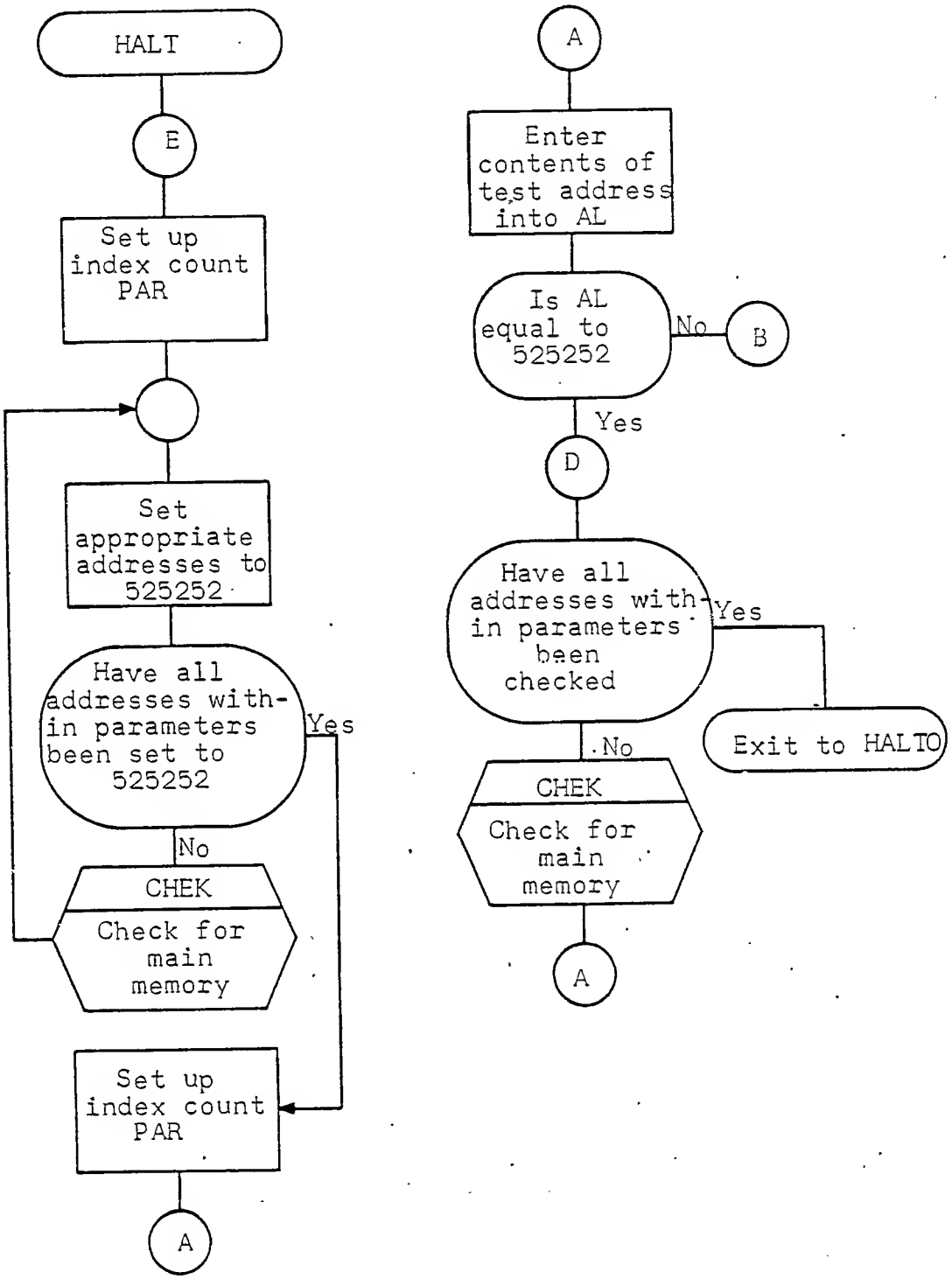
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

CHEK
PROOF
HALTO

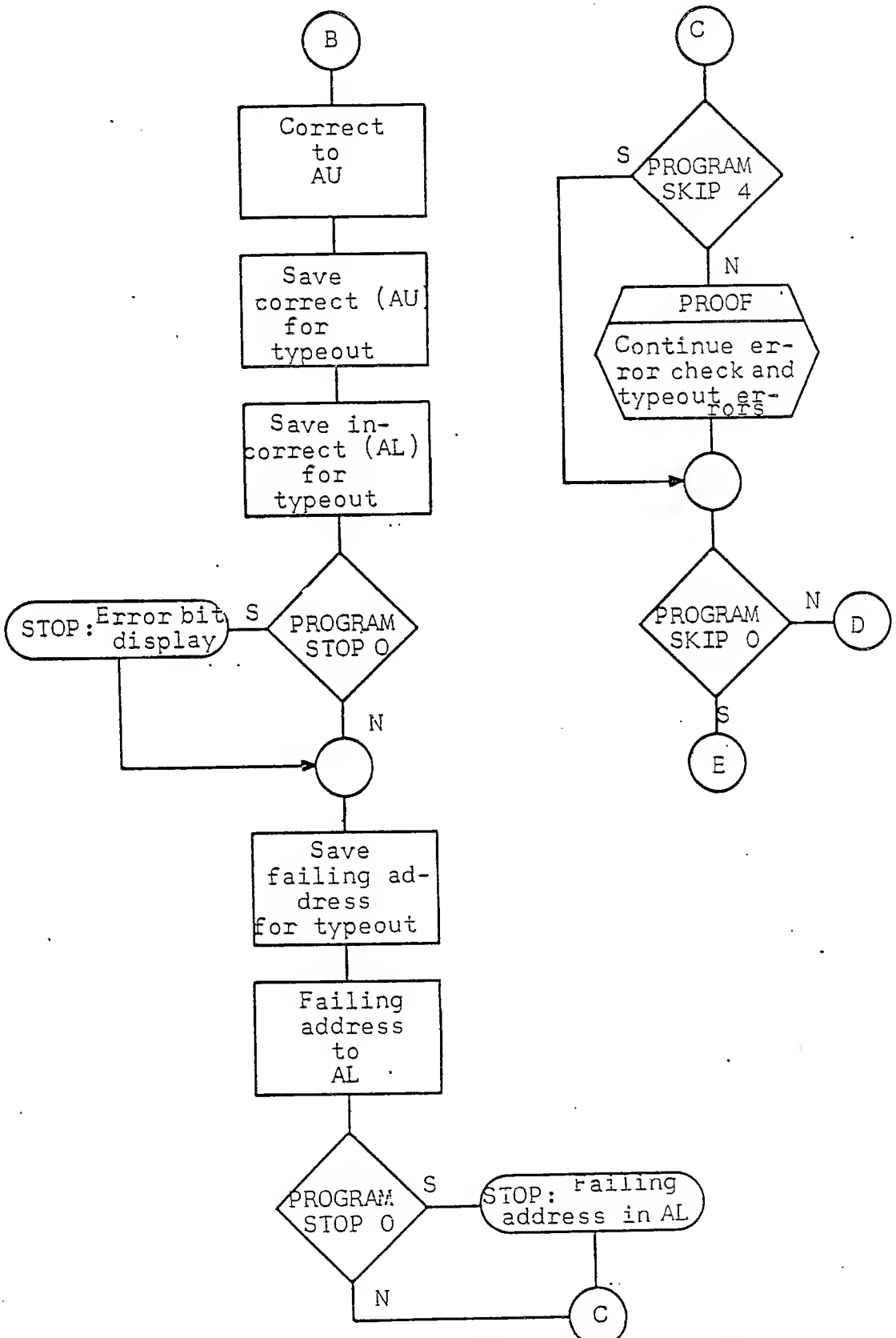
SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

ERROR DISPLAYS
1st PROGRAM STOP 0 - correct information in AU (525252) incorrect information in AL
2nd PROGRAM STOP 0 - failing address displayed in AL
PROGRAM SKIP 4 - not set for error typeout
set to suppress error typeout
PROGRAM SKIP 0 - not set to continue routine HALT
set to recycle routine HALT



HALT - Hold alternate ones and zeroes



HALT - Hold alternate ones and zeroes

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET	REVISION
703	—

SPECIFICATION SYMBOL
SB-10163

TITLE: HALTO - HOLD ALTERNATE ZEROES AND ONES

DECK IDENTIFIER: FACT

CS-1 LABEL: HALTO KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 35

DESCRIPTION:

This routine, HALTO, checks the ability of the control memory to receive and retain a pattern of alternate zeroes and ones (252525).

This routine is entered from routine HALT.

Control memory is loaded with alternate zeroes and ones (252525). When the load is completed, the content of each sequential address is entered into AL and checked for validity. If the contents are incorrect, AU is entered with the correct information (the incorrect being in AL) and PROGRAM STOP 0 is checked. If set, the routine stops and the display may be evaluated. Upon restarting, AL is entered with the failing address and, if PROGRAM STOP 0 is still set, the subroutine stops for address display. If PROGRAM STOP 0 is not set, or upon restarting, PROGRAM SKIP 4 is referenced. If it is not set an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set, HALTO will recycle, if not set, the test will continue. Upon successful completion of HALTO, an exit is made to routine WP1.

TITLE: HALTO - HOLD ALTERNATE ZEROES AND ONES

INPUT PARAMETERS (Listed Sequentially):

PAR	TEST PATTERN
PAR1	252525

OUTPUT PARAMETERS (Listed Sequentially):

DIP
DIP+1
HERE

ABNORMAL EXITS (Listed Sequentially):

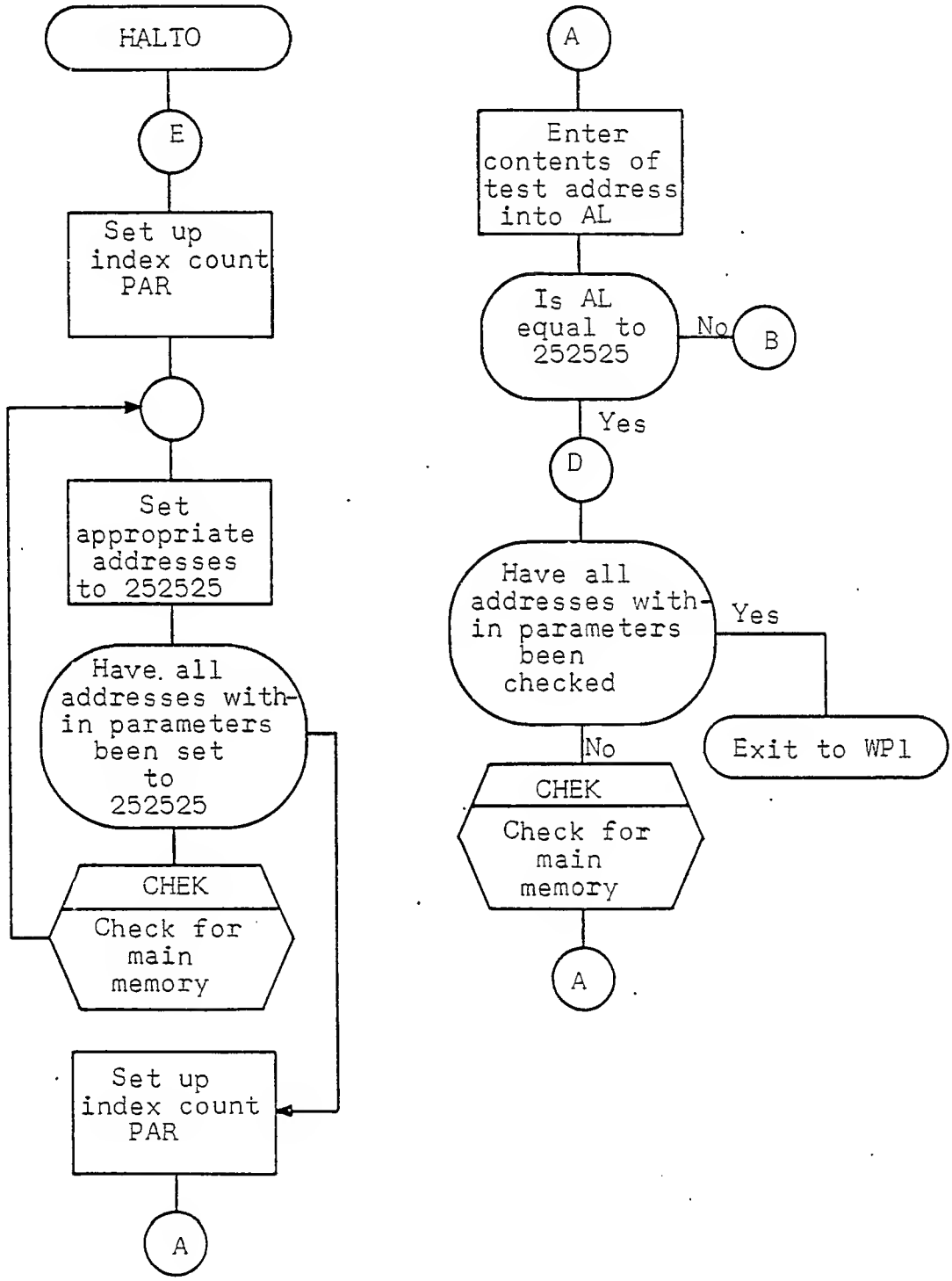
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

CHEK
PROOF
WP1

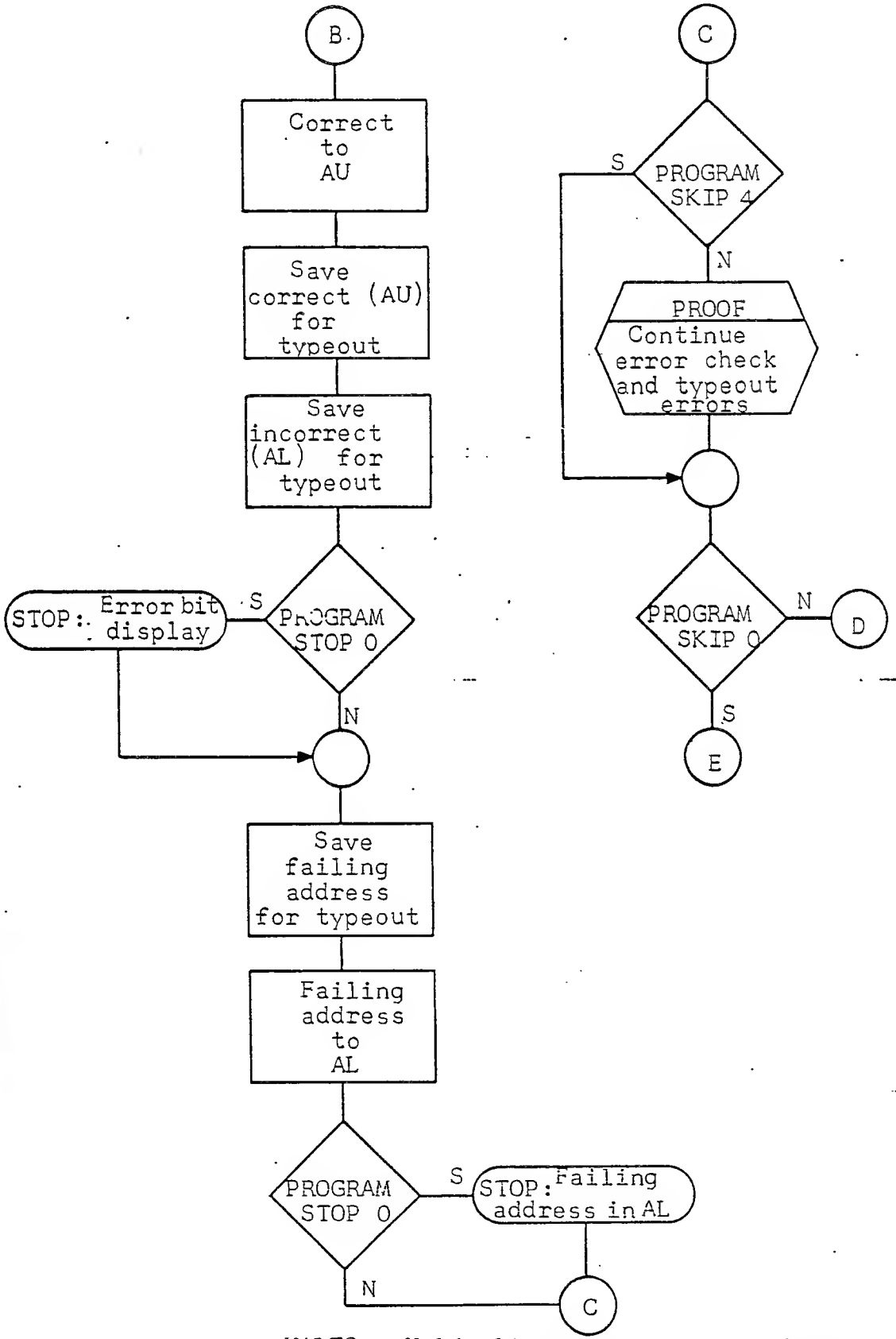
SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

ERROR DISPLAYS
1st PROGRAM STOP 0 - correct information in AU (252525) incorrect information in AL
2nd PROGRAM STOP 0 - failing address displayed in AL
PROGRAM SKIP 4 - not set for error typeout
set to suppress error typeout
PROGRAM SKIP 0 - not set to continue routine HALTO
set to recycle routine HALT 0



HALTO - Hold alterante zeroes and ones



HALTO - Hold alternate zeroes and ones

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 707 | REVISION —

SPECIFICATION SYMBOL SB-10163

TITLE: WP1 - WORST PATTERN

DECK IDENTIFIER: FACT

CS-1 LABEL: WP1 KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 59

DESCRIPTION:

This routine, WP1, tests the ability of the control memory to accept and retain the worst pattern.

This routine is entered from routine HALTO.

The worst pattern causes maximum cross-talk noise. The following arrangement produces the maximum noise. The address storage selection is attained by utilizing an address parity mask of 000100. If upon checking, parity is found to be odd, all ones are loaded; if even the complement or all zeroes are loaded. After the control memory is loaded the content of each sequential address is entered into AL and checked for validity. If it is incorrect an exit is made to the error display routine AIR, upon completion of the error check, subroutine FLUSH, is utilized to set the tested control memory to all ones then to all zeroes. Then an exit is made to the next test routine CWP 1.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 708 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: WP1 - WORST PATTERN

INPUT PARAMETERS (Listed Sequentially):

PAR
PAR1

TEST PATTERNS
CKWP 13 000000
CKWP 14 777777

OUTPUT PARAMETERS (Listed Sequentially):

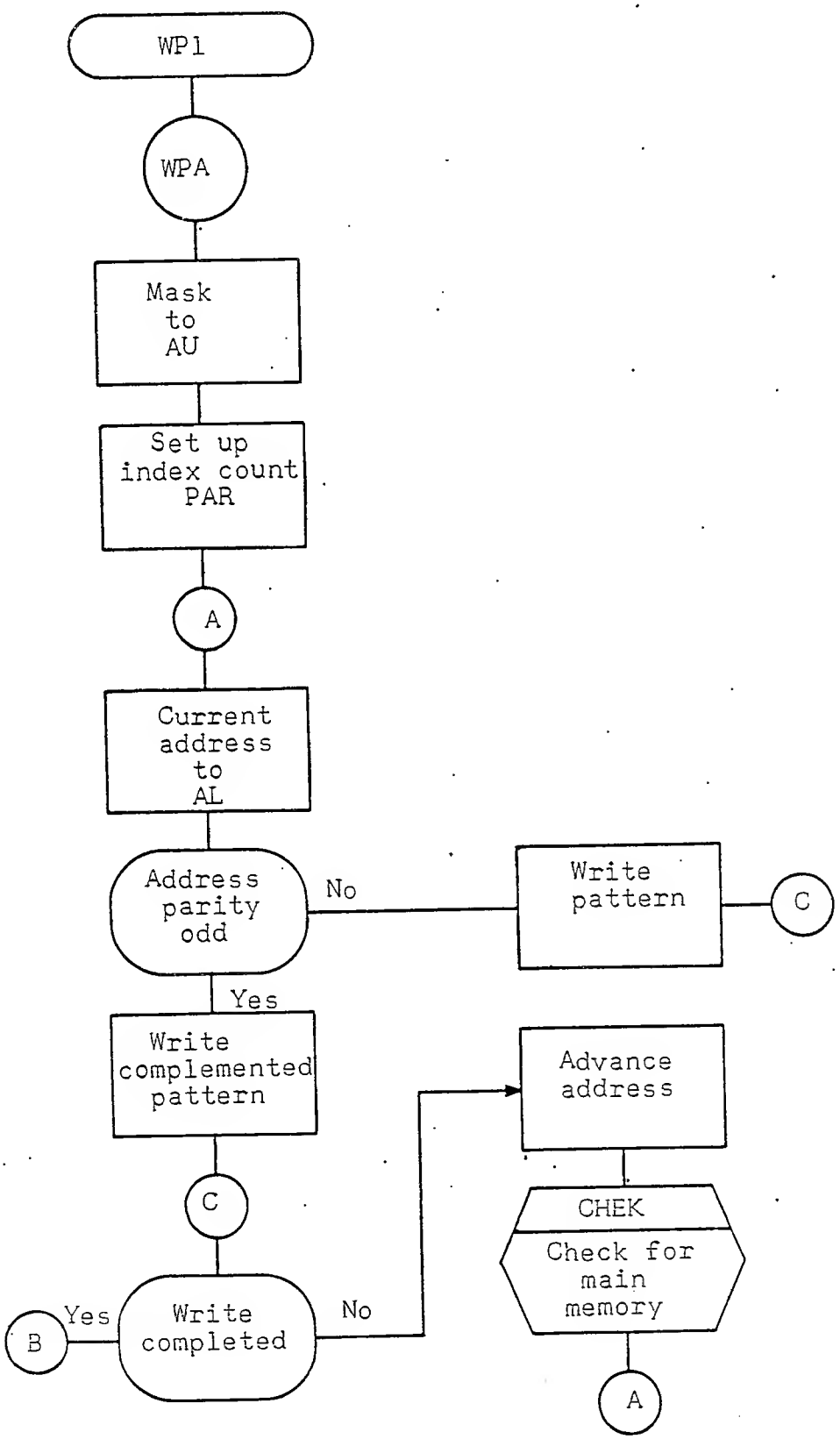
ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

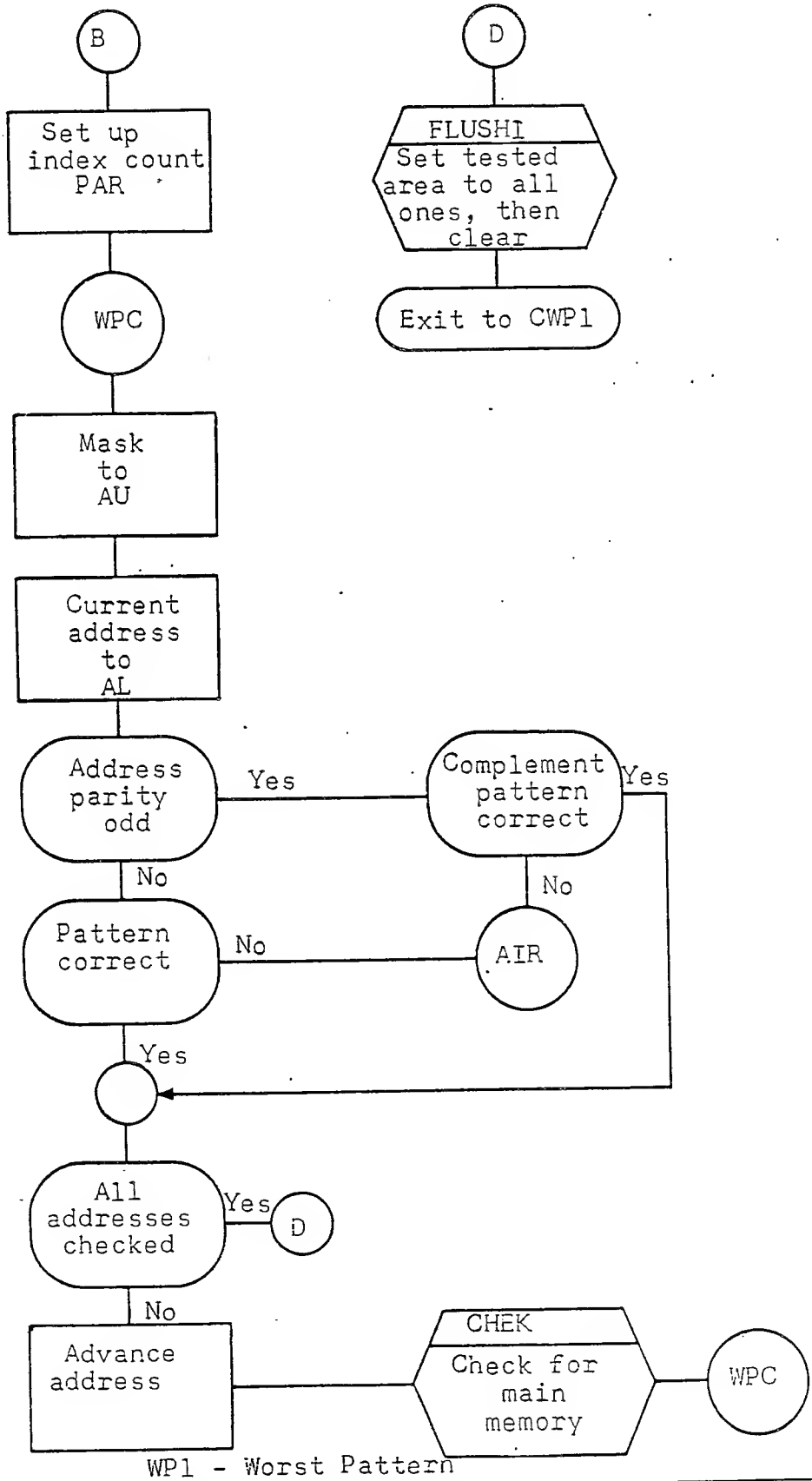
CHEK
AIR
FLUSH1
CWP1

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:



WP1 - Worst Pattern



WP1 - Worst Pattern

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 711 | REVISION —

SPECIFICATION SYMBOL
B-10163

TITLE: AIR - WORST PATTERN ERROR DISPLAY

DECK IDENTIFIER: FACT

CS-1 LABEL: AIR KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLF DATE: 8 Dec. '67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 34

DESCRIPTION:

This routine, AIR, is the error display for the worst pattern routine, WP1.

Should an error be detected by the validity check in the WP1 routine, an entry is made to this routine, AIR.

When AIR is entered, AU is entered with the correct information and AL is entered with the incorrect, then AU and AL are saved for the error typeout and PROGRAM STOP 0 is checked. If PROGRAM STOP 0 is set the subroutine stops and the display may be evaluated. Upon restarting, the failing address is entered into AL then stored for the error typeout and PROGRAM STOP 0 is checked. If it is set the routine stops and the operator may note the failing address. Upon restarting, or if PROGRAM STOP 0 is not set, PROGRAM SKIP 4 is checked. If it is not set an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set, WP1 will recycle, if not set the error check in WP1 will continue.

TITLE: AIR - WORST PATTERN ERROR DISPLAY

INPUT PARAMETERS (Listed Sequentially):

TEST PATTERNS	
CKWP13	000000
CKWP14	777777

OUTPUT PARAMETERS (Listed Sequentially):

HERE
THERE
DIP
DIP+1

ABNORMAL EXITS (Listed Sequentially):

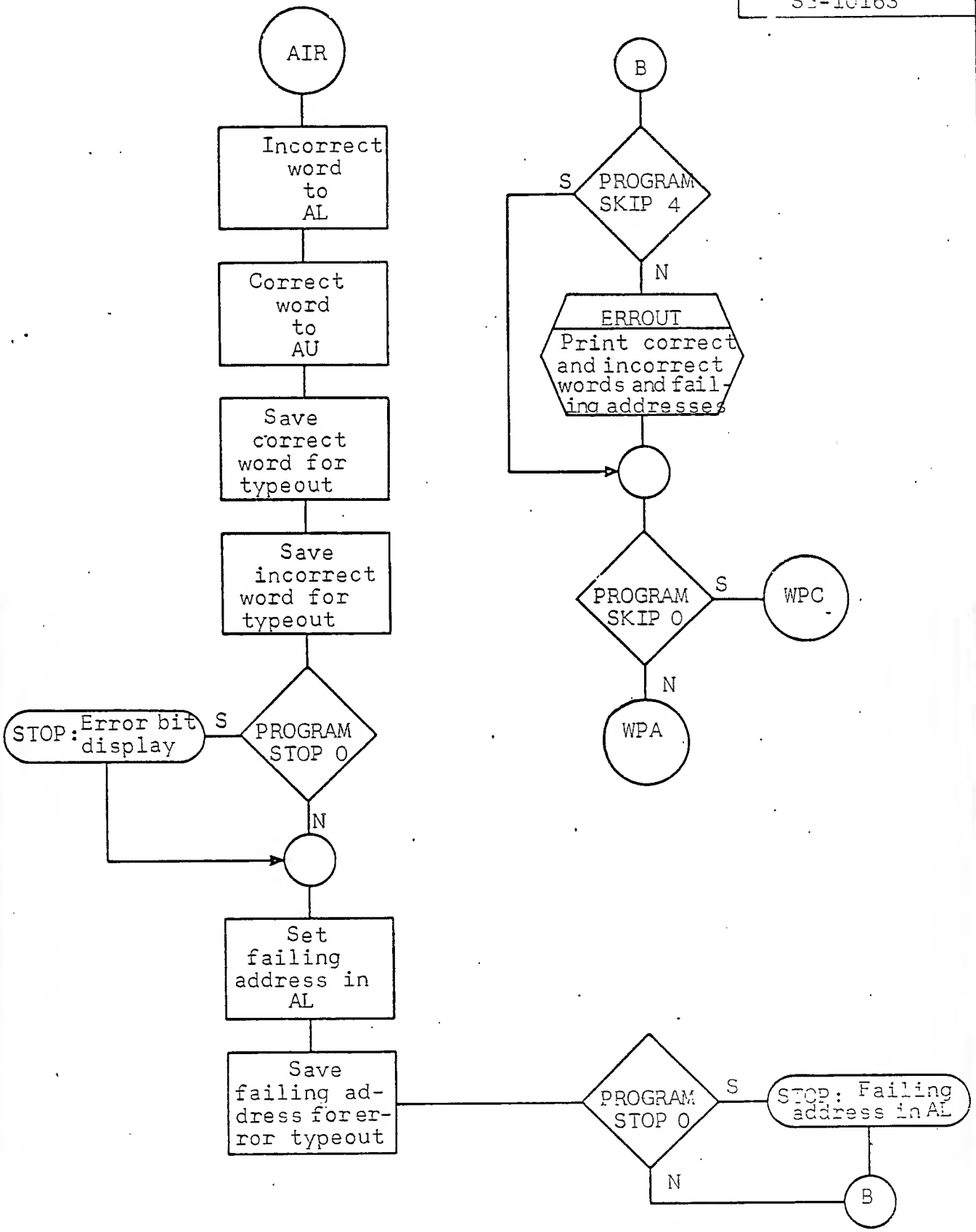
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

ERROUT
WP1

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

ERROR DISPLAYS
1st PROGRAM STOP 0 - correct information in AU incorrect information in AL
2nd PROGRAM STOP 0 - failing address displayed in AL
PROGRAM SKIP 4 - not set for error typeout
set to suporess error typeout
PROGRAM SKIP 0 - not set to continue routine WP1
set to recycle routine WP1



AIR - Worst Pattern Error Display

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 714 | REVISION —

SPECIFICATION SYMBOL
83-10163

TITLE: CWP1 - COMPLEMENT WORST PATTERN

DECK IDENTIFIER: FACT

CS-1 LABEL: CWP1 KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by FLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 58

DESCRIPTION:

This routine, CWP1, tests the ability of the control memory to accept and retain the worst pattern.

This routine is entered from routine WP1.

The complement worst pattern causes maximum cross-talk noise. The following arrangement produces the maximum noise. The address storage selection is attained by utilizing an address parity mask of 000100. If upon checking, parity is found to be even, all ones are loaded; if odd the complement or all zeroes are loaded. After the control memory is loaded the content of each sequential address is entered into AL and checked for validity. If it is incorrect an exit is made to the error display routine CAIR; upon completion of the error check, subroutine FLUSH, is utilized to set the tested control memory to all ones then to all zeroes. Then an exit is made to the next test routine RW.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 715	REVISION —

SPECIFICATION SYMBOL
S[illegible]-10163

TITLE: CWP1 - COMPLEMENT WORST PATTERN

INPUT PARAMETERS (Listed Sequentially):

PAR	TEST PATTERNS	
PAR1	CKWP14	777777
	CKWP13	000000

OUTPUT PARAMETERS (Listed Sequentially):

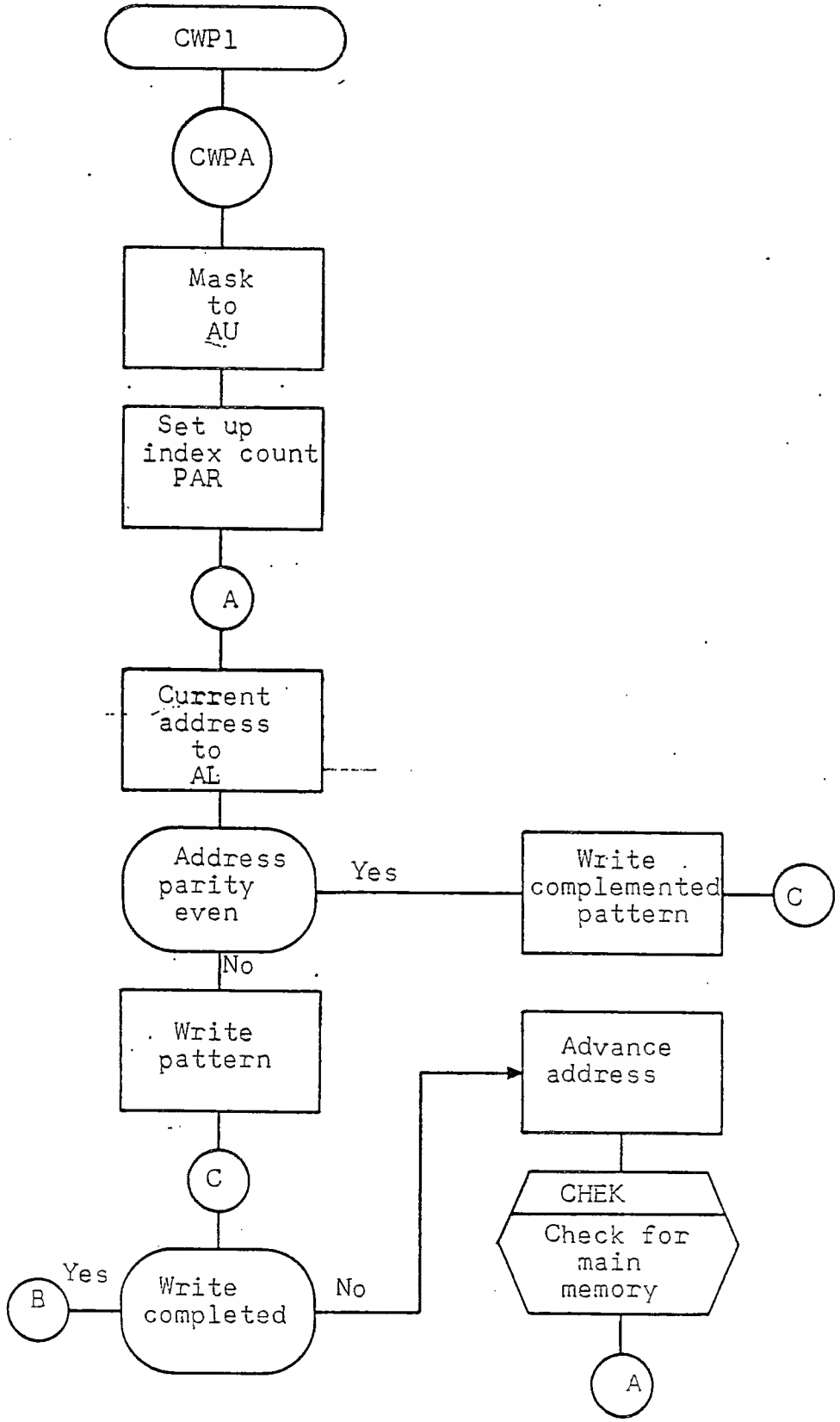
ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

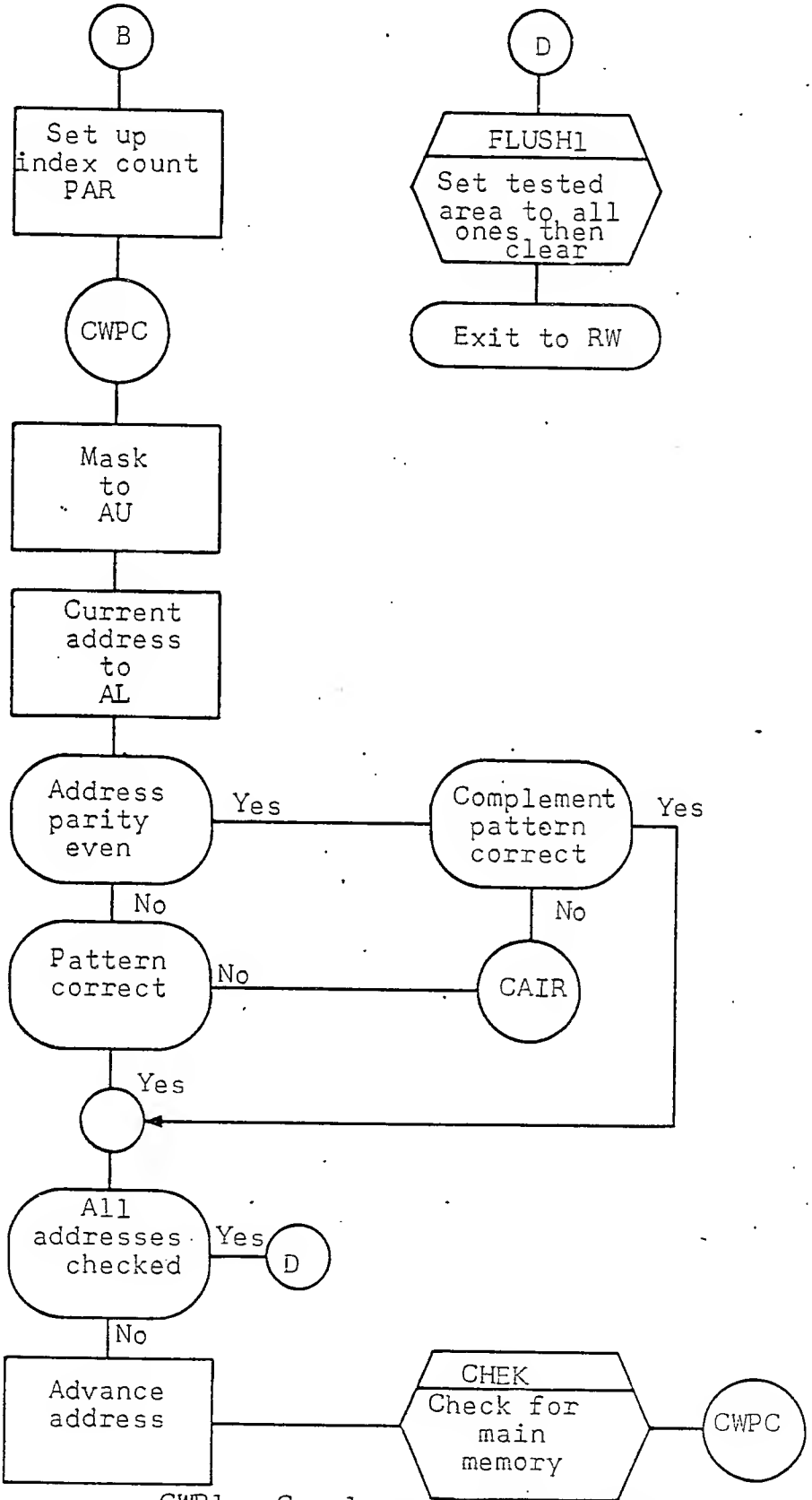
CHEK
CAIR
FLUSH1
RW

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:



CWP1 - Complement Worst Pattern



CWP1 - Complement Worst Pattern

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 718 | REVISION —

SPECIFICATION SYMBOL
SB-10163

TITLE: CAIR - COMPLEMENT WORST PATTERN ERROR DISPLAY

DECK IDENTIFIER: FACT

CS-1 LABEL: CAIR KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 32

DESCRIPTION:

This routine, CAIR, is the error display for the complement worst pattern routine, CWP1.

Should an error be detected by the validity check in the CWP1 routine, an entry is made to this routine, CAIR.

When CAIR is entered, AU is entered with the correct information and AL is entered with the incorrect, then AU and AL are saved for the error typeout and PROGRAM STOP O is checked. If PROGRAM STOP O is set the subroutine stops and the display may be evaluated. Upon restarting, the failing address is entered into AL then stored for the error typeout and PROGRAM STOP O is checked. If it is set the routine stops and the operator may note the failing address. Upon restarting, or, if PROGRAM STOP O is not set, PROGRAM SKIP 4 is checked. If it is not sent an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP O is checked. If set, CWP1 will recycle; if not set, the error check in CWP1 will continue.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont) | SHEET 719 | REVISION —

SPECIFICATION SYMBOL
SP-10163

TITLE: CAIR - COMPLEMENT WORST PATTERN ERROR DISPLAY

INPUT PARAMETERS (Listed Sequentially):

TEST PATTERNS

CKWP14 777777
CKWP13 000000

OUTPUT PARAMETERS (Listed Sequentially):

HERE
THERE
DIP
DIP+1

ABNORMAL EXITS (Listed Sequentially):

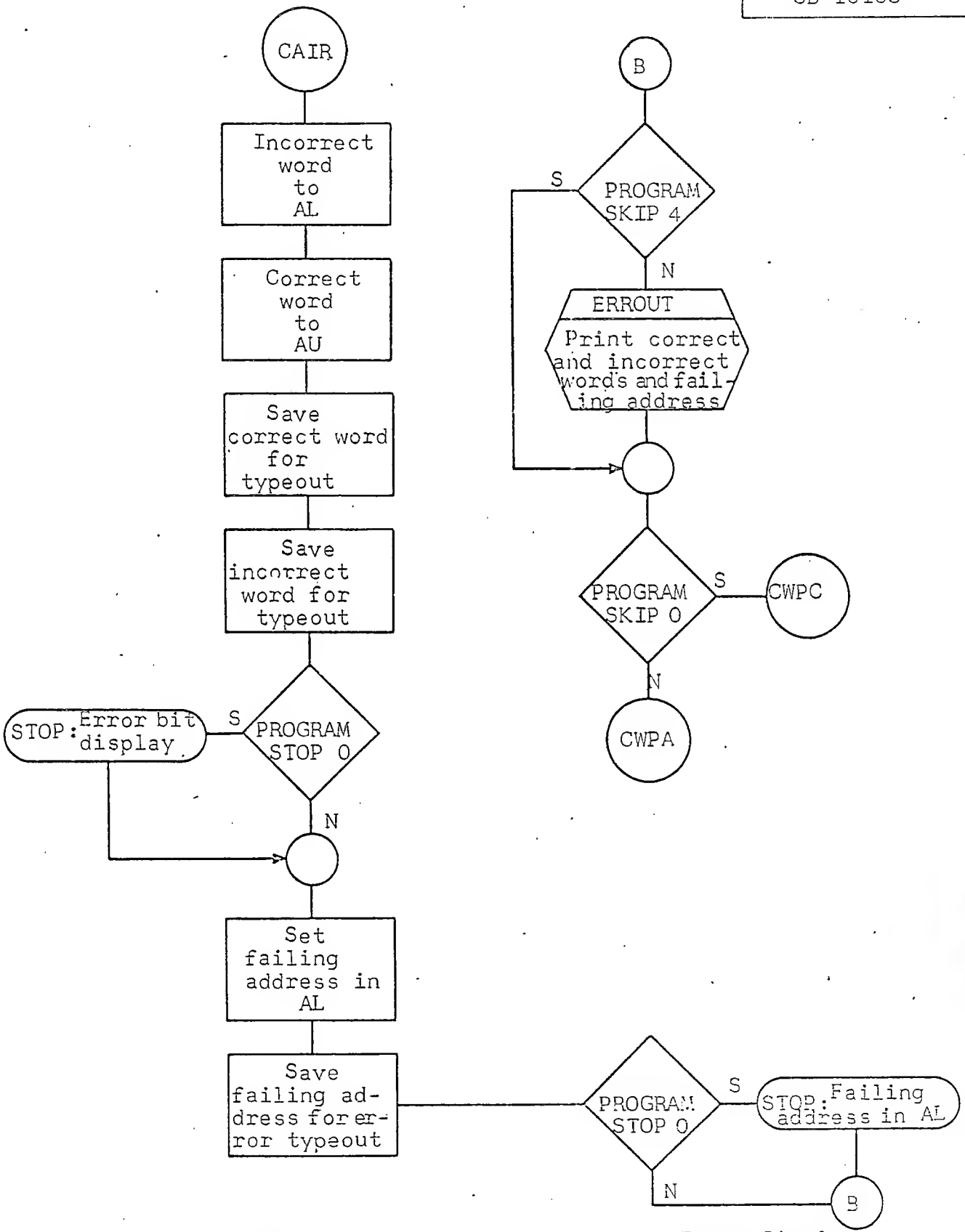
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

ERROUT
CWP1

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

ERROR DISPLAYS
1st PROGRAM STOP 0 - Correct information in AU incorrect information in AL.
2nd PROGRAM STOP 0 - Failing address displayed in AL
PROGRAM SKIP 4 - Not set for error typeout
Set to suppress error typeout
PROGRAM SKIP 0 - Not set to continue routine CWP1
Set to recycle routine CWP1



CAIR - Complement Worst Pattern Error Display

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 721 | REVISION

SPECIFICATION SYMBOL
SB-10163

TITLE: RW - READ/WRITE RANDOM WORD TEST

DECK IDENTIFIER:

CS-1 LABEL: RW KEY: IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 70

DESCRIPTION:

This routine, RW, tests the ability of the control memory to accept and retain numbers and accomplish a fast read/write.

This routine is entered from routine CWP1.

This routine RW takes numbers generated by the random-number-generator subroutine (RAN) and stores them in the control memory. Simultaneously, a second store is made at another set of addresses to set up an image of the information being stored. This enables verification of the storages by comparing the two information cells at the completion of the fast read. For the fast read/write each address under test is read repeatedly 40 times. When the addresses have been read 40 times their contents are checked for validity. If the comparison with the image addresses does not check, the incorrect information is entered into AL, the correct is entered into AU, then AU and AL are saved for the error typeout, and PROGRAM STOP 0 is checked. If PROGRAM STOP 0 is set, the routine stops and the display may be evaluated. Upon restarting, or if PROGRAM STOP 0 is not set, the failing address is entered into AL, then AL is stored for the error typeout and PROGRAM STOP 0 is checked. If set the routine stops and the operator may note the failing address. Upon restarting or if PROGRAM STOP 0 is not set, PROGRAM SKIP 4 is checked. If not set an error typeout will occur. After the typeout, or if PROGRAM SKIP 4 is set, PROGRAM SKIP 0 is checked. If set RW will recycle, if not set RW will continue. After the completion of RW an exit is made to routine LCON.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 722 | REVISION C

SPECIFICATION SYMBOL
SB-10163

TITLE: RW - READ/WRITE RANDOM TEST

INPUT PARAMETERS (Listed Sequentially):

PAR
PAR1

OUTPUT PARAMETERS (Listed Sequentially):

HERE
THERE
DIP
DIP+1

ABNORMAL EXITS (Listed Sequentially):

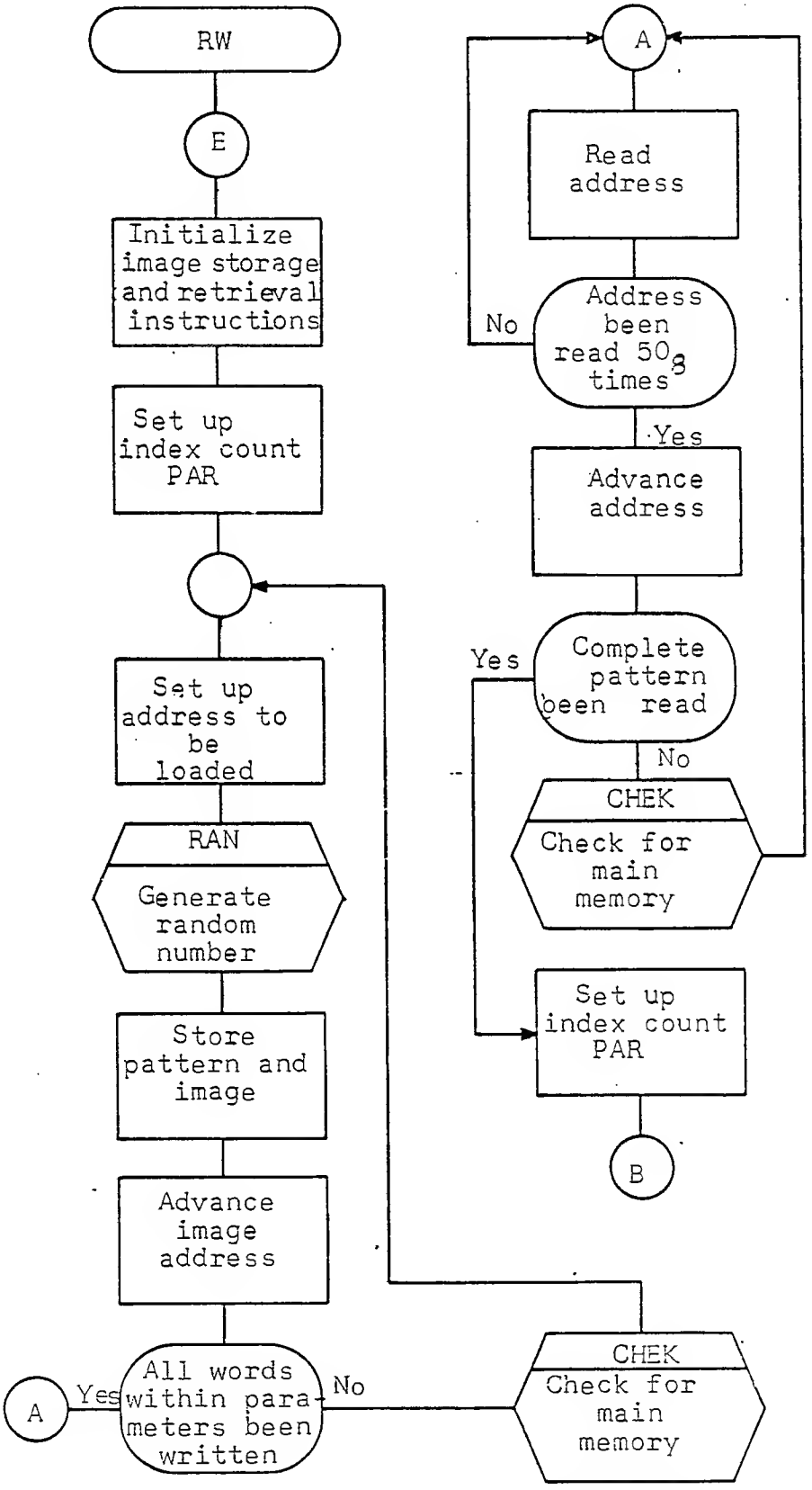
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

RAN
CHEK
ERROUT
LCON

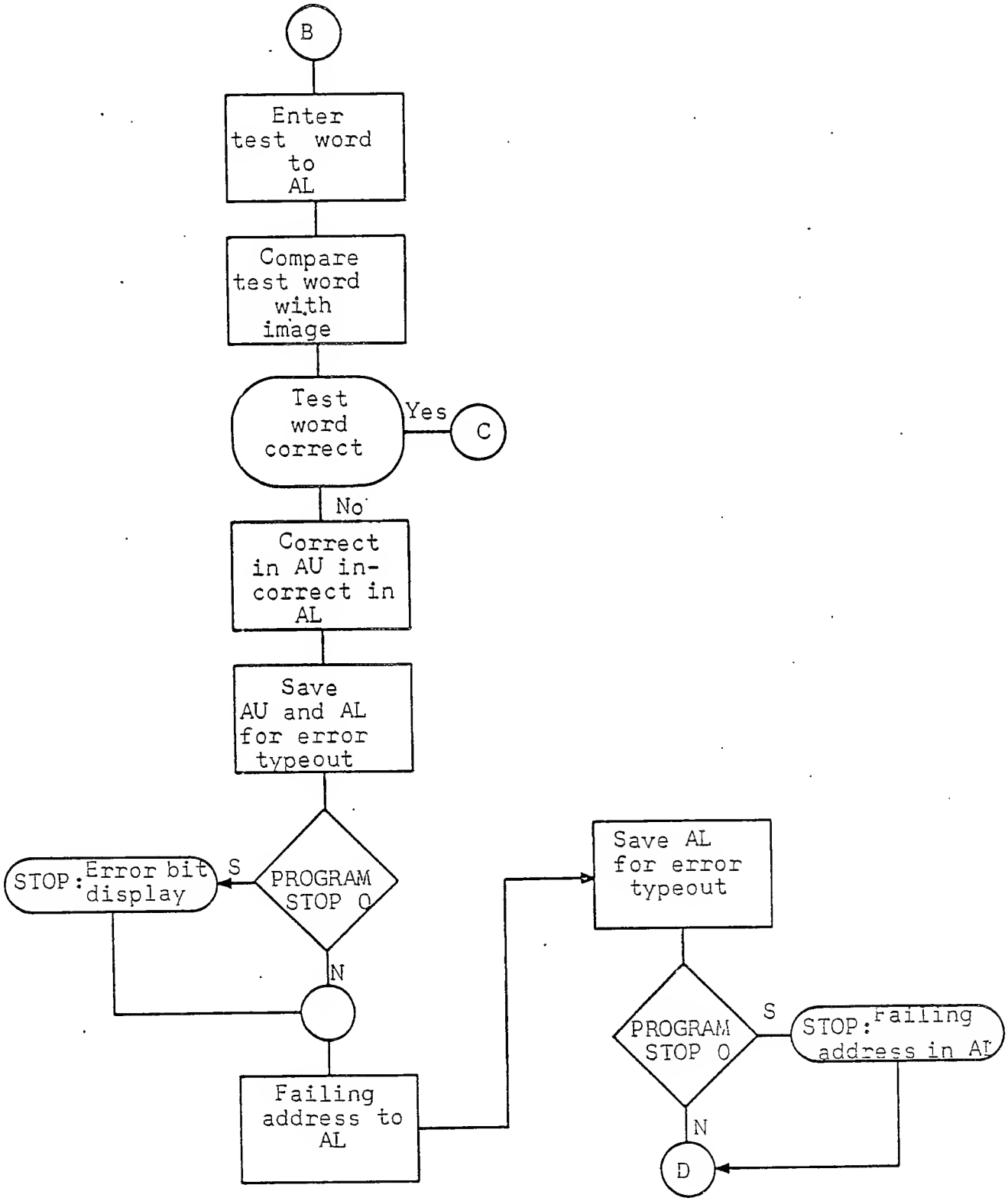
SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:

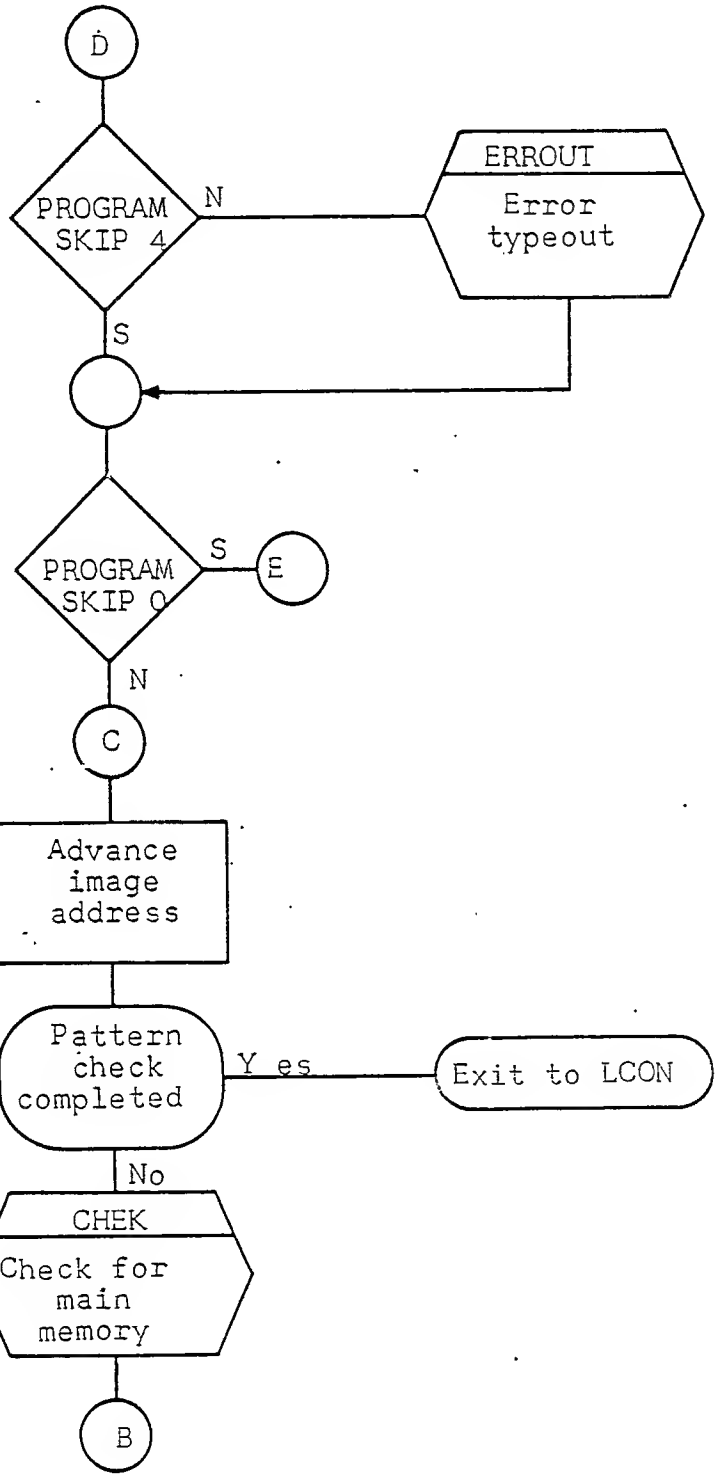
ERROR DISPLAYS
1st PROGRAM STOP 0 - Correct information in AU incorrect in AL
2nd PROGRAM STOP 0 - Failing address displayed in AL
PROGRAM SKIP 4 - Not set for error typeout
Set to supress error typeout
PROGRAM SKIP 0 - Not set to continue routine RW
Set to continue routine RW



RW - Read/Write Random Word Test



RW - Read/Write Random Word Test



RW - Read/Write Random Word Test

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 726 | REVISION ~

SPECIFICATION SYMBOL
SB-10163

TITLE: RAN - RANDOM NUMBER GENERATOR

DECK IDENTIFIER: FACT

CS-1 LABEL: RAN KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: P [illegible] C modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 11

DESCRIPTION:

This subroutine generates a series of random numbers which are used by the read/write test, RW. Two basic constants are used: 0007031 (RAN2) and 377775 (RAN3). RAN2 is entered into AU and multiplied by itself. At the completion of the multiply, the contents of A are divided by RAN3 (377775) and AU is checked. If AU is not equal to zero the contents of AU are stored at RAN2. If AU is equal to zero the contents of AL are stored at RAN2, thereby setting a new constant for the next generation of a random number. An exit is then made to the referencing subroutine, RW.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 727 REVISION U

SPECIFICATION SYMBOL SP-10163

TITLE: RAN - RANDOM NUMBER GENERATOR

INPUT PARAMETERS (Listed Sequentially):

OUTPUT PARAMETERS (Listed Sequentially):

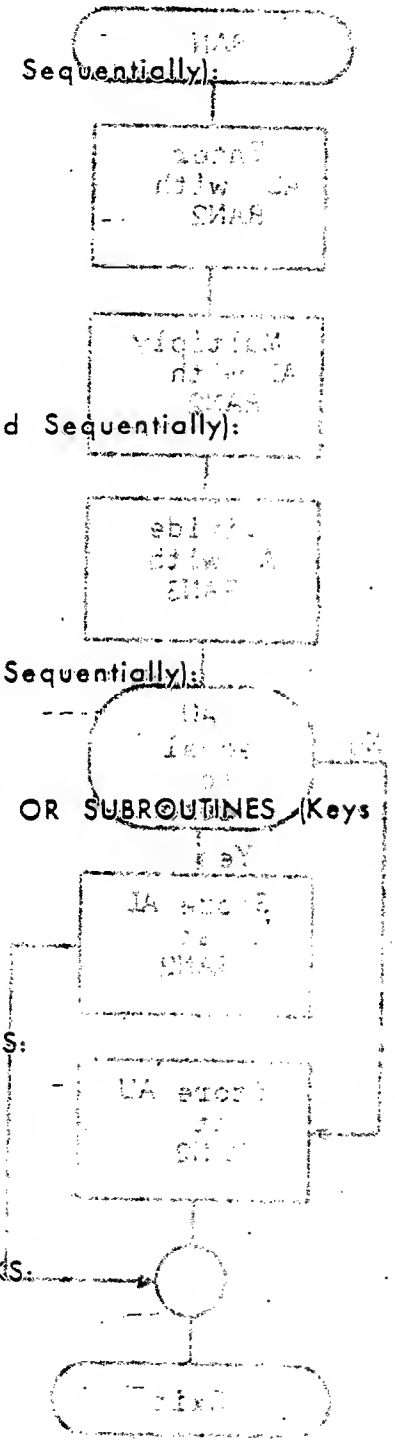
ABNORMAL EXITS (Listed Sequentially):

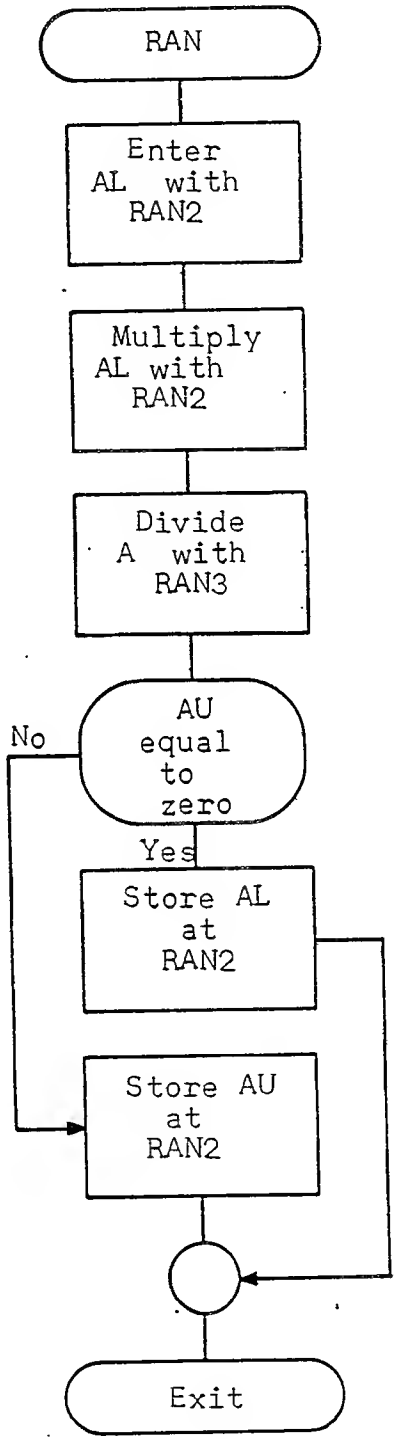
NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

RW

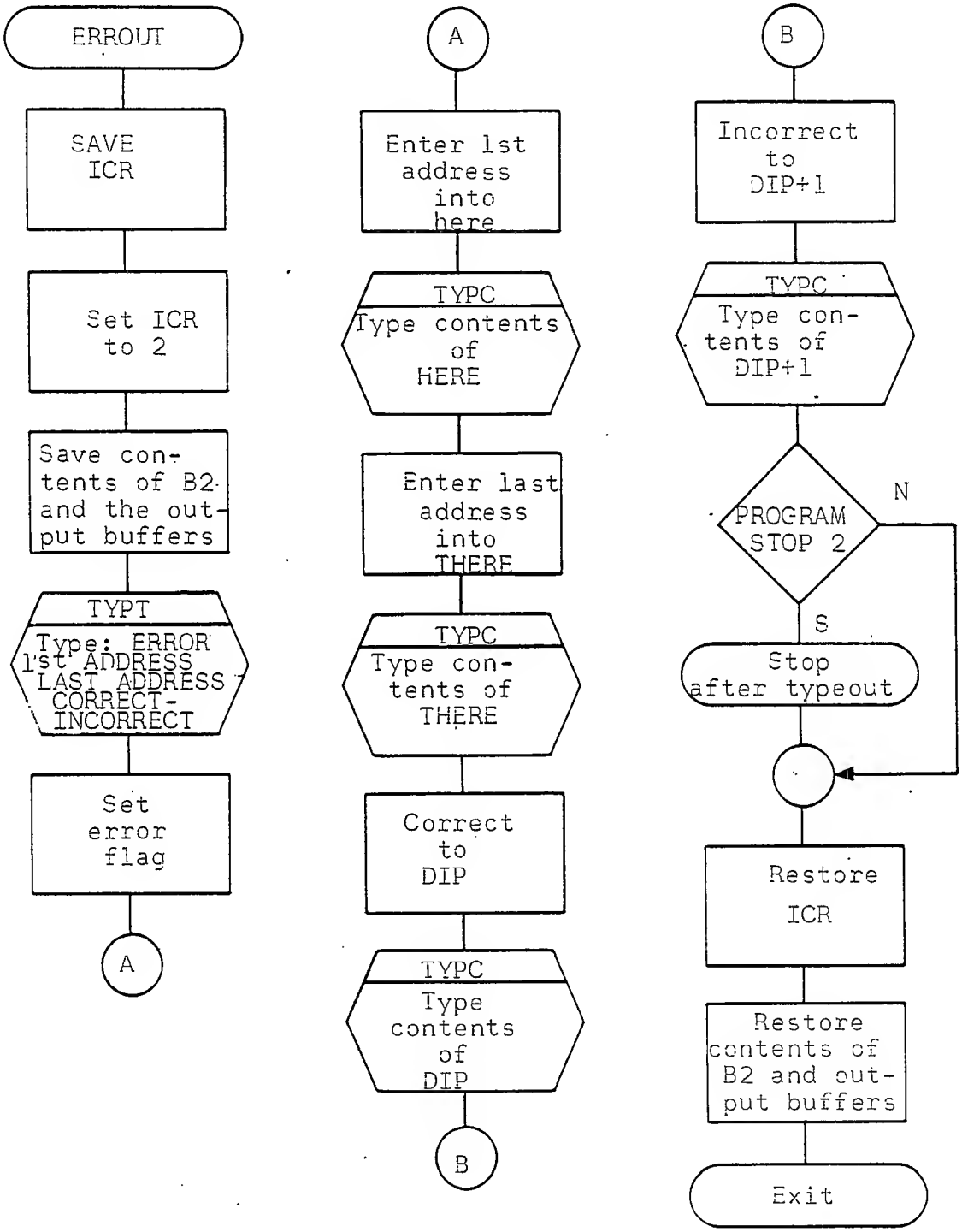
SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:





RAN - Random Number Generator


ERROUT
SAVE ICR
Set ICR to 2
Save contents of B2 and the output buffers
TYPT
Type: ERROR
1st ADDRESS
LAST ADDRESS
CORRECT-
INCORRECT
Set error flag
A
A
Enter 1st address into here
TYPC
Type contents of HERE
Enter last address into THERE
TYPC
Type contents of THERE
Correct to DIP
TYPC
Type contents of DIP
B
B
Incorrect to DIP+1
TYPC
Type contents of DIP+1
PROGRAM STOP 2
N
S
Stop after typeout
Restore ICR
Restore contents of B2 and output buffers
Exit

ERROUT

LABEL: LCON

TITLE AND/OR PURPOSE: LCON, the Hammer Test, Hammers a value into a cell located within control memory to see if any other control memory cell changes value as a result..

INPUT PARAMETERS:
None

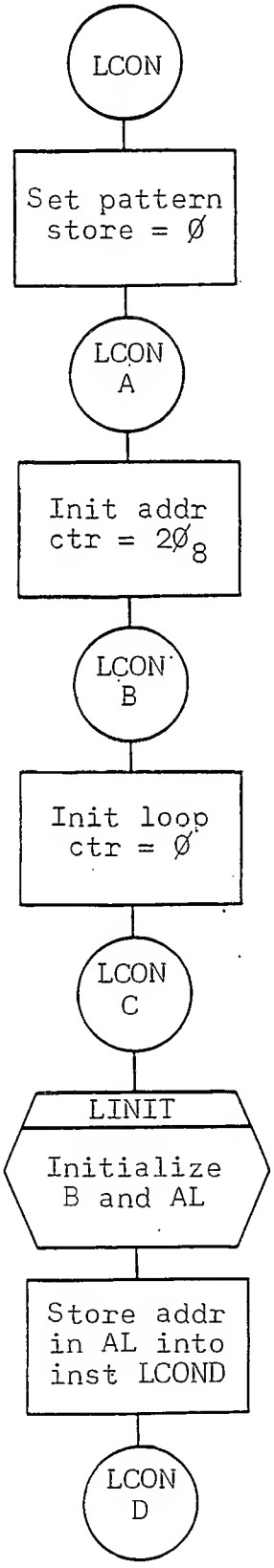
OUTPUT PARAMETERS:
None

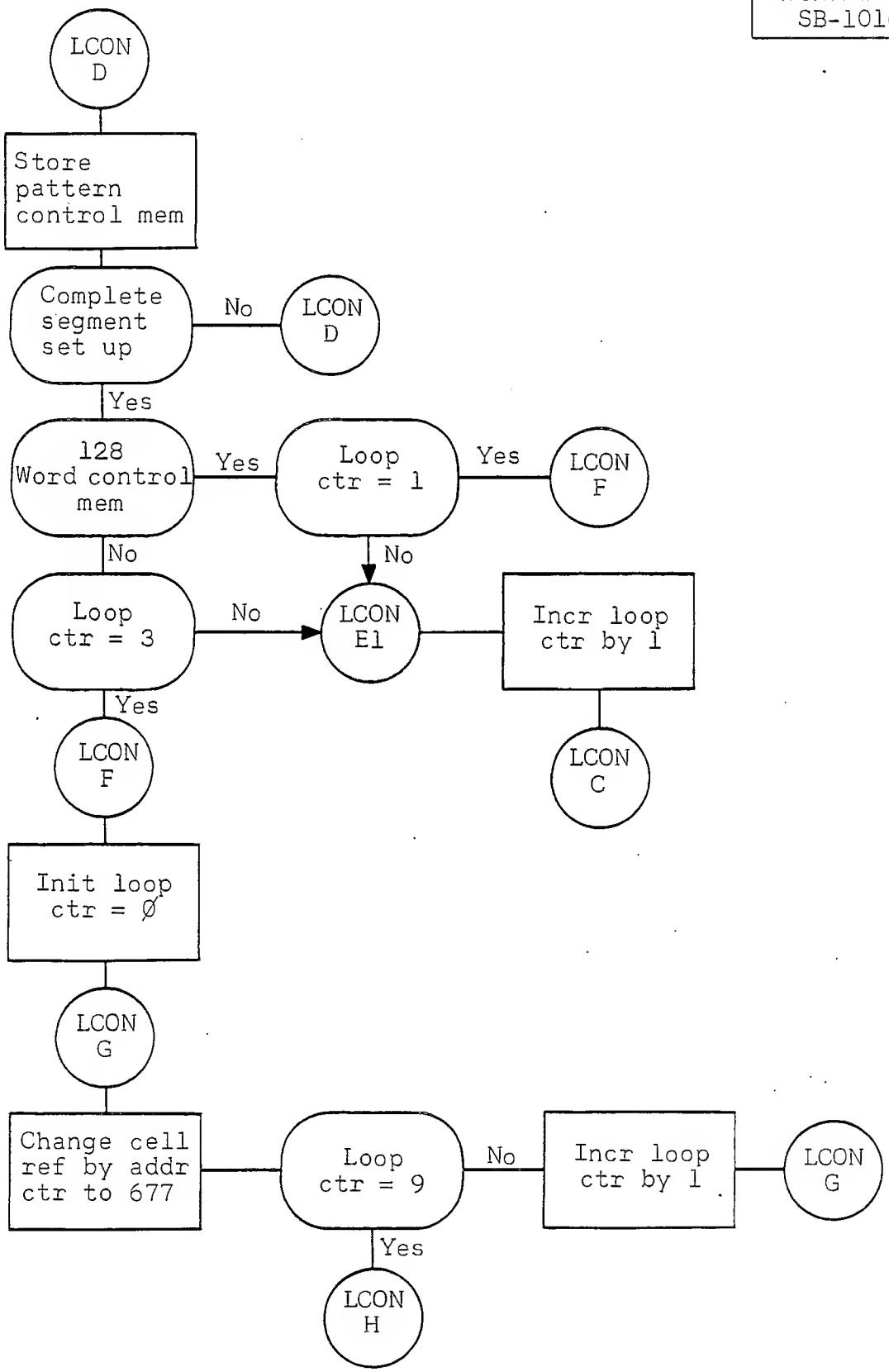
DESCRIPTION:
All cells within control memory are set to zero and then the first cell (address 20) is changed to the value 677 by hammering this value into the cell 10 times. The entire control memory is then checked to see if it was left unchanged by this action. If an error is detected and PROGRAM SKIP 4 is not set, a message is typed to display the error.

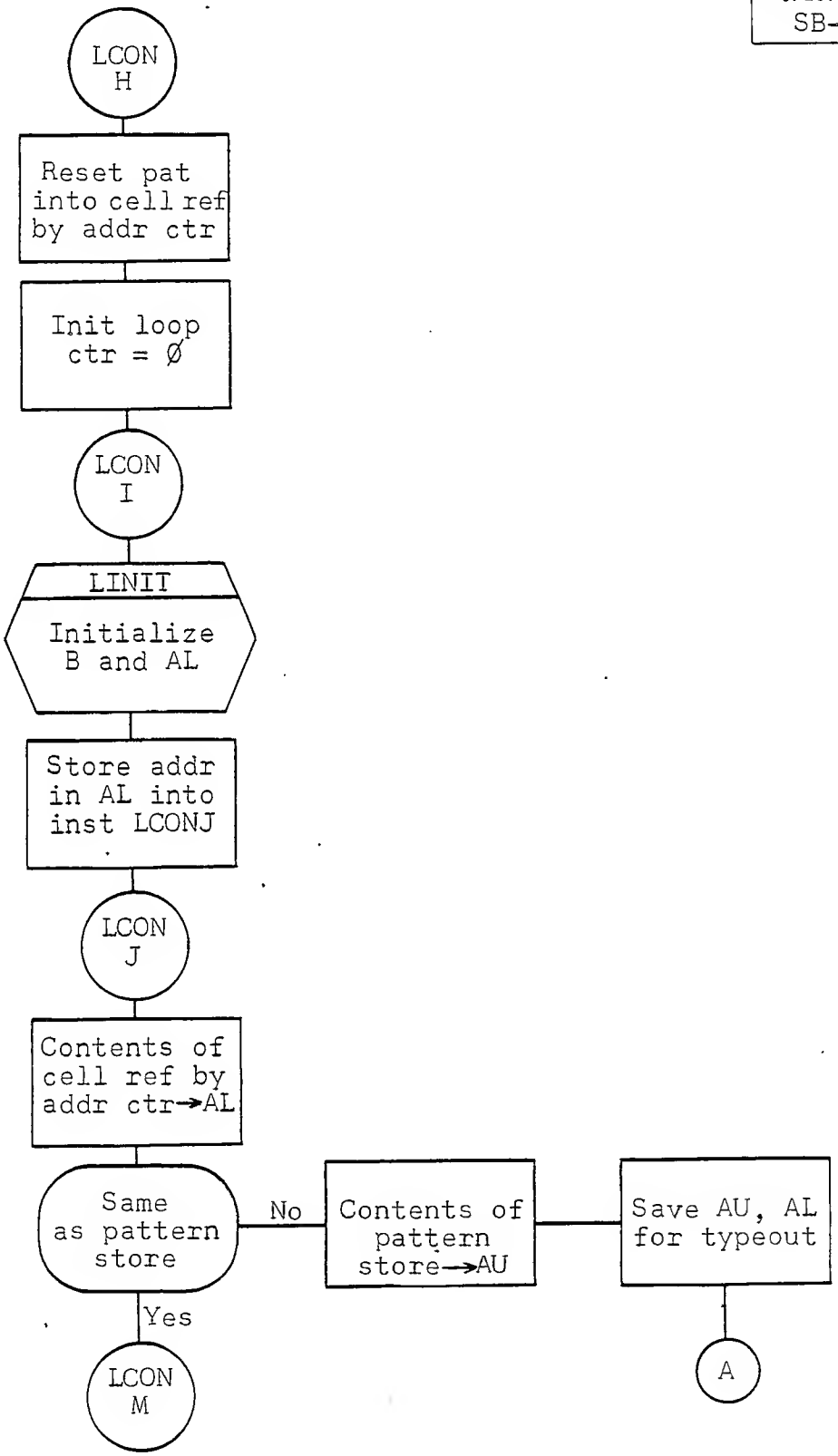
All cells are again set to zero and the hammering action for value 677 takes place into address 21. Following the error check, the procedure is repeated for each address within control memory.

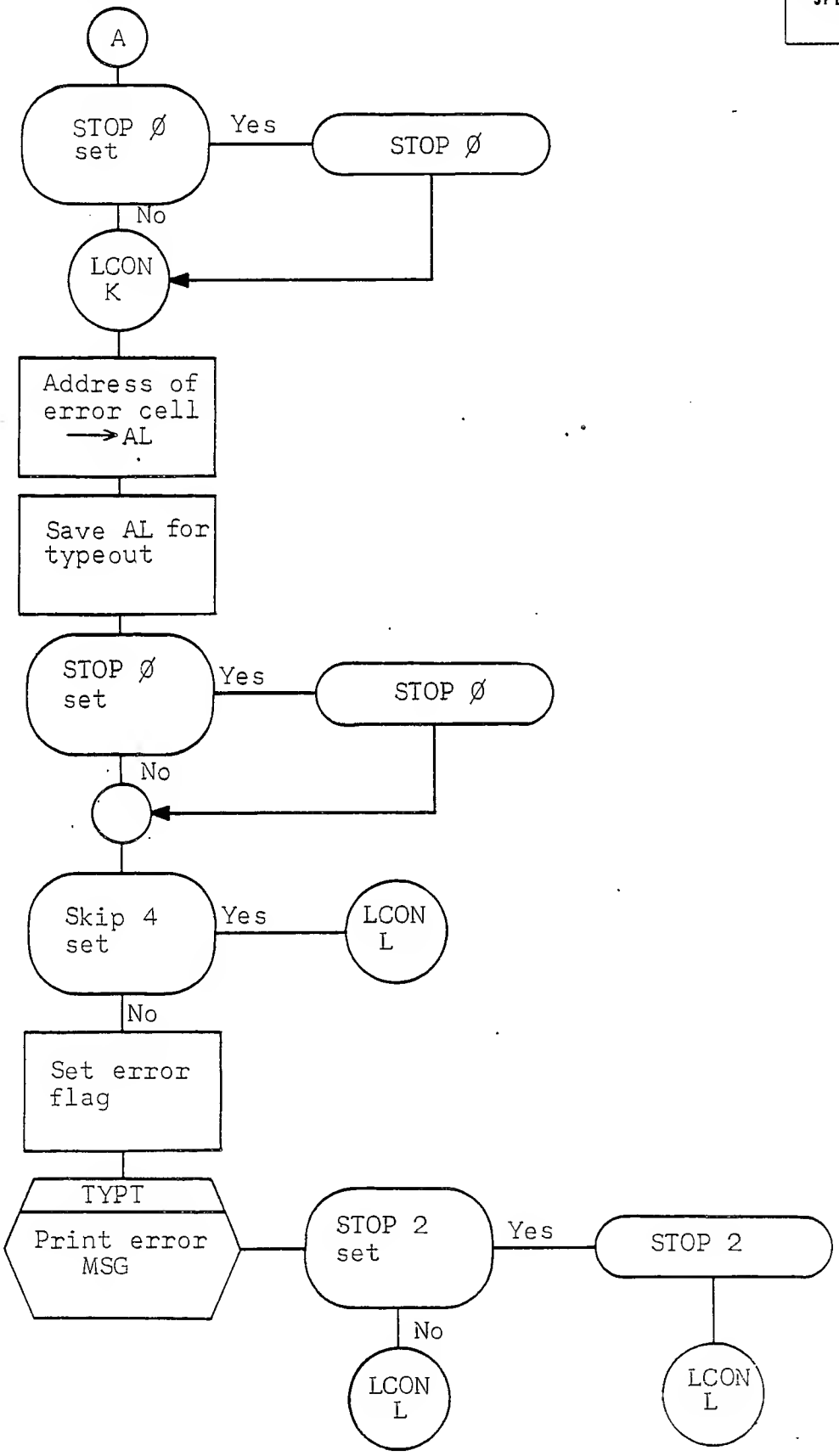
When the last address within control memory has been tested by the procedure with value 677, the entire test cycle, starting again with address 20, is repeated. The one difference is that all cells will initially be set to 777777 each time instead of zero.

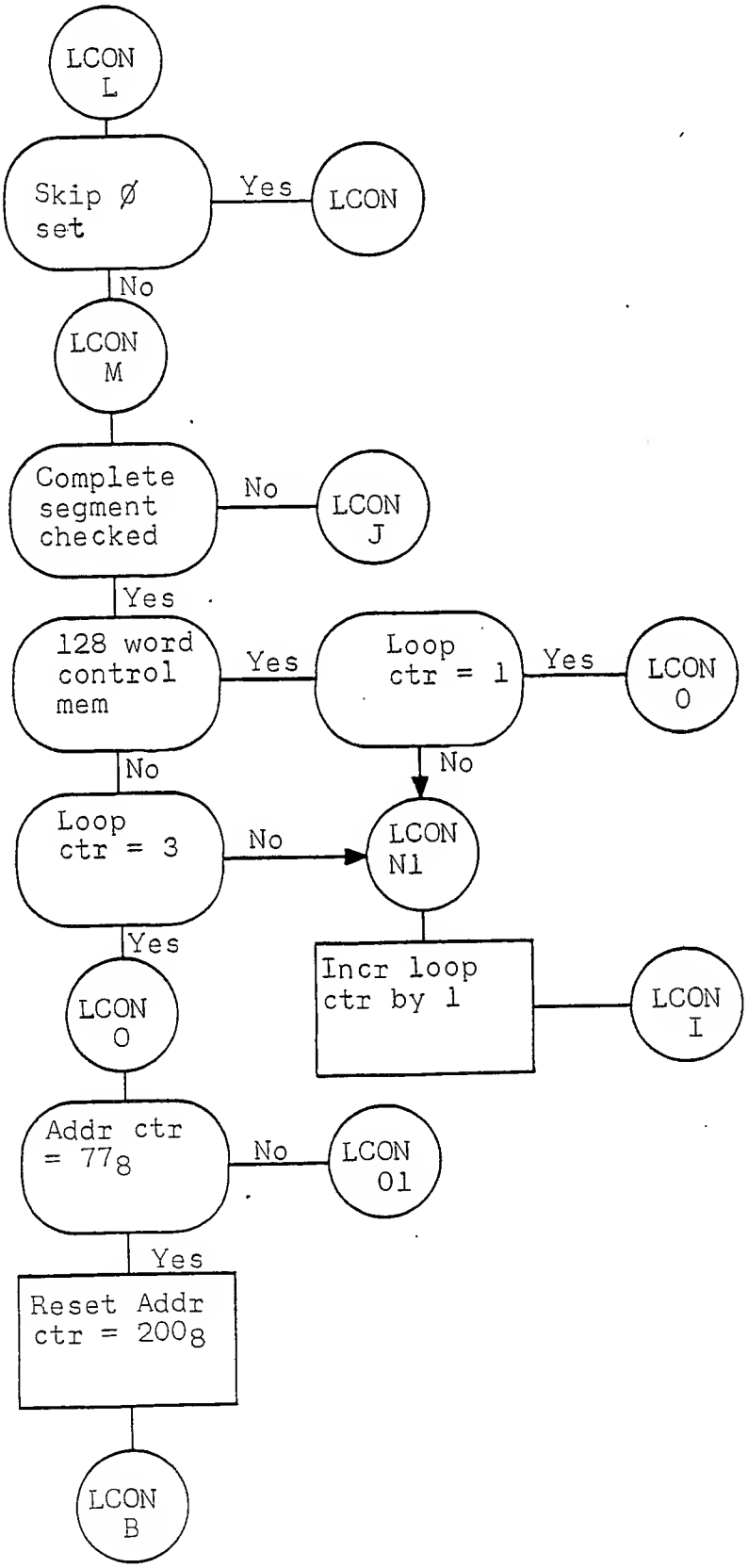
At the end of this cycle, an exit is made to routine FLUSH.

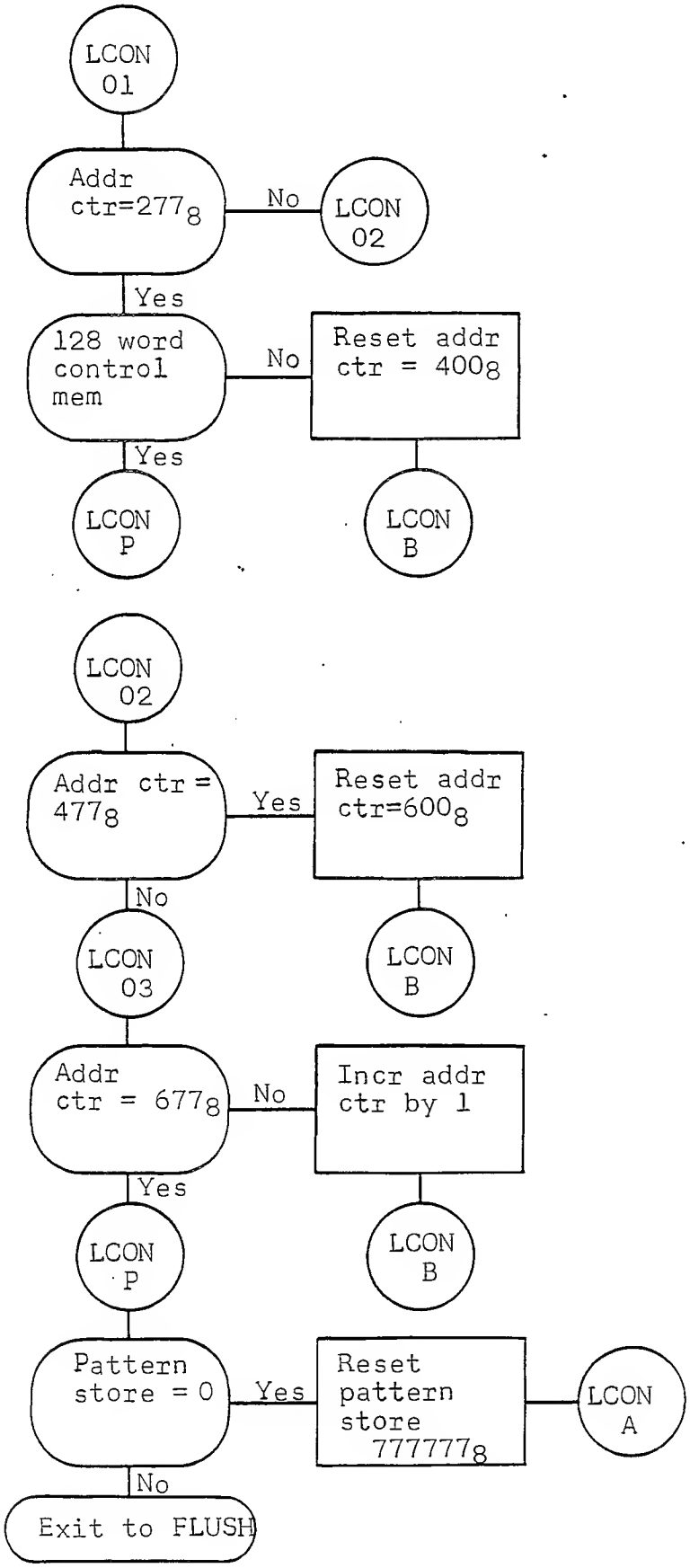

LCON
Set pattern store = Ø
LCON A
Init addr ctr = 20₈
LCON B
Init loop ctr = Ø
LCON C
LINIT
Initialize B and AL
Store addr in AL into inst LCOND
LCON D


LCON D
Store pattern control mem
Complete segment set up
No
LCON D
Yes
128 Word control mem
Yes
Loop ctr = 1
Yes
LCON F
No
No
Loop ctr = 3
No
LCON E1
Incr loop ctr by 1
Yes
LCON F
LCON C
Init loop ctr = Ø
LCON G
Change cell ref by addr ctr to 677
Loop ctr = 9
No
Incr loop ctr by 1
LCON G
Yes
LCON H


LCON H
Reset pat into cell ref by addr ctr
Init loop ctr = Ø
LCON I
LINIT
Initialize B and AL
Store addr in AL into inst LCONJ
LCON J
Contents of cell ref by addr ctr→AL
Same as pattern store
No
Contents of pattern store→AU
Save AU, AL for typeout
A
Yes
LCON M


A
STOP Ø set
Yes
STOP Ø
No
LCON K
Address of error cell →AL
Save AL for typeout
STOP Ø set
Yes
STOP Ø
No
Skip 4 set
Yes
LCON L
No
Set error flag
TYPT
Print error MSG
STOP 2 set
Yes
STOP 2
No
LCON L
LCON L


LCON L
Skip Ø set
Yes
LCON
No
LCON M
Complete segment checked
No
LCON J
Yes
128 word control mem
Yes
Loop ctr = 1
Yes
LCON O
No
No
Loop ctr = 3
No
LCON N1
Yes
LCON O
Incr loop ctr by 1
LCON I
Addr ctr = 77₈
No
LCON 01
Yes
Reset Addr ctr = 200₈
LCON B


LCON 01
Addr ctr=277$_8$
No
LCON 02
Yes
128 word control mem
No
Reset addr ctr = 400$_8$
Yes
LCON P
LCON B
LCON 02
Addr ctr = 477$_8$
Yes
Reset addr ctr=600$_8$
No
LCON 03
LCON B
Addr ctr = 677$_8$
No
Incr addr ctr by 1
Yes
LCON P
LCON B
Pattern store = 0
Yes
Reset pattern store 777777$_8$
LCON A
No
Exit to FLUSH

LABEL: LINIT

TITLE AND/OR PURPOSE: Initialize B and set AL with the segment initial address.

INPUT PARAMETERS:
None

OUTPUT PARAMETERS:
B set to an address bias
AL set to a base address

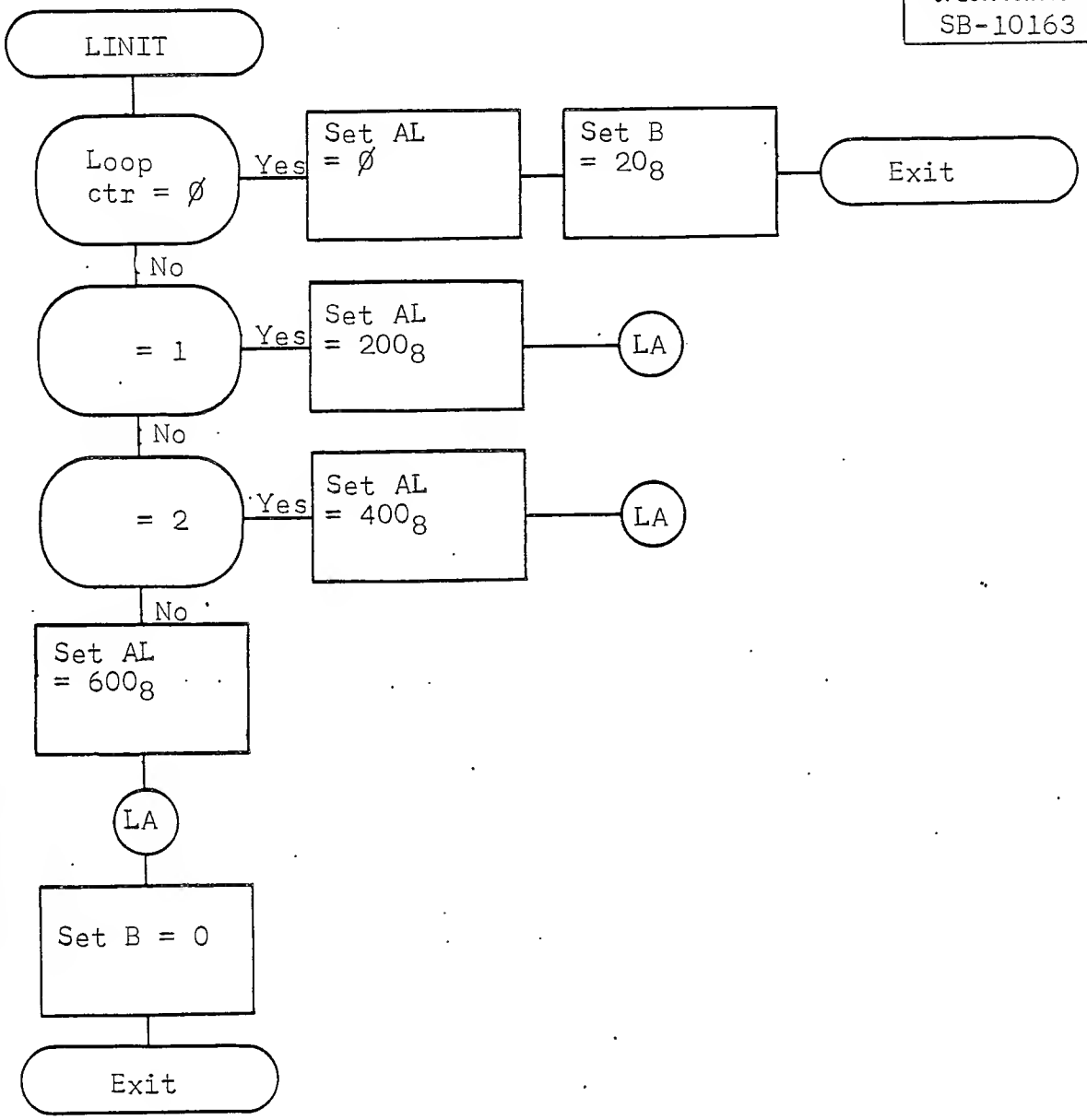
DESCRIPTION:
The loop counter (LOOP) is referenced to see which segment of control memory is next for a store operation or about to be checked. The initial address of the segment is set into AL and an address bias is set into B before the exit as follows:

a. If LOOP = 0, AL is set to 0 and B is set to 20 octal

b. If LOOP = i, AL is set to 200 octal and B is set to 0

c. If LOOP = 2, AL is set to 400 octal and B is set to 0

d. If LOOP = 3, AL is set to 600 octal and B is set to 0


LINIT
Loop ctr = Ø
Yes
Set AL = Ø
Set B = 20₈
Exit
No
= 1
Yes
Set AL = 200₈
LA
No
= 2
Yes
Set AL = 400₈
LA
No
Set AL = 600₈
LA
Set B = 0
Exit

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 729 | REVISION —

SPECIFICATION SYMBOL
SP-10163

TITLE: FLUSH1- FLUSH CONTROL MEMORY

DECK IDENTIFIER: FACT

CS-1 LABEL: FLUSH1 KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 22

DESCRIPTION:

This subroutine, FLUSH1, normalizes the control memory.

This subroutine is referenced by routines WP1, CWP1, and FLUSH.

The cells of control memory are first set to all ones (777777) then all the cells are cleared to zero (000000). An exit is then made to the referencing routine.

TITLE: FLUSH1 - FLUSH CONTROL MEMORY

INPUT PARAMETERS (Listed Sequentially):

TEST PATTERNS
PAT1 -777777

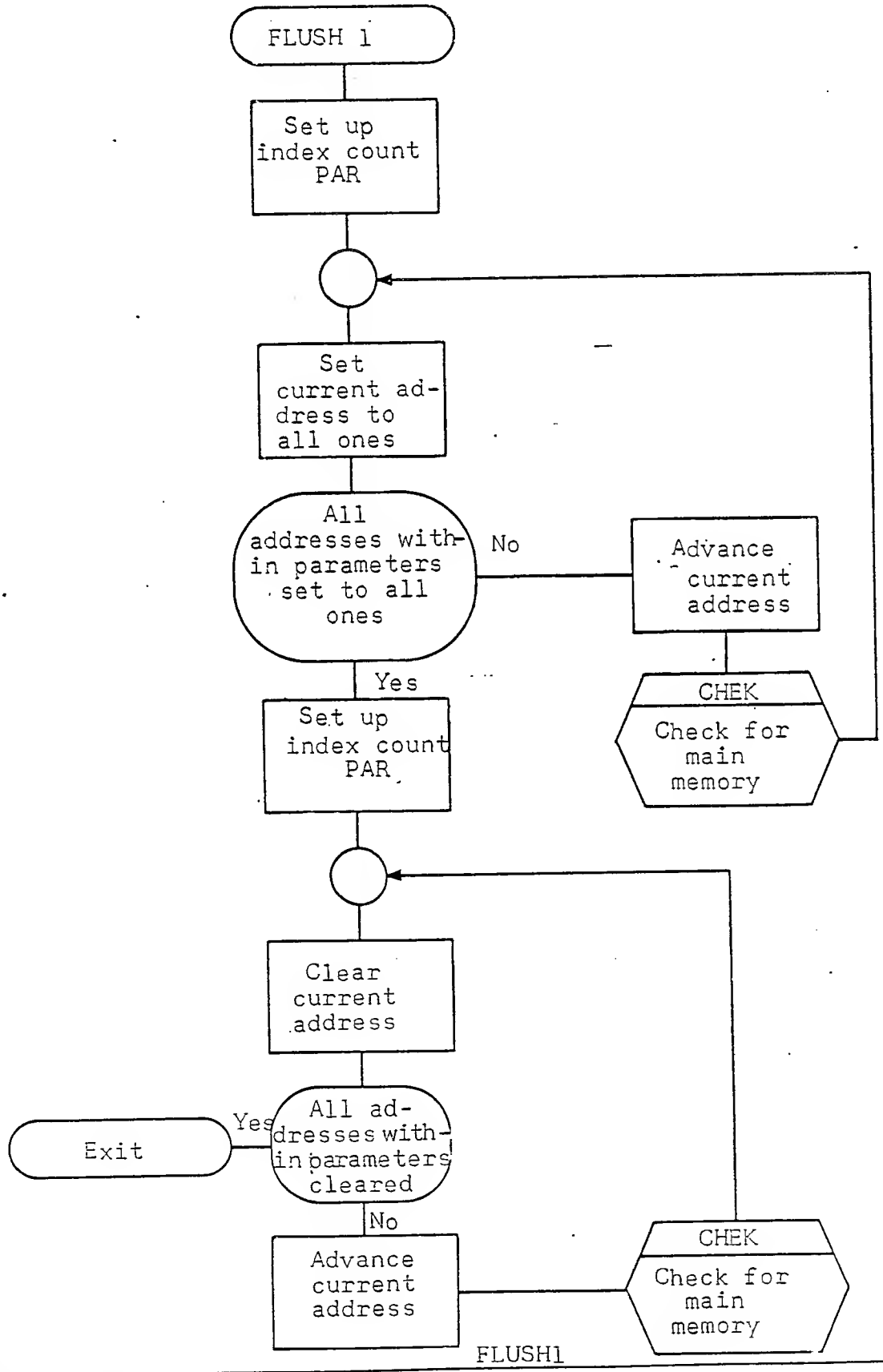
OUTPUT PARAMETERS (Listed Sequentially):

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):
CHEK

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:


FLUSH 1
Set up index count PAR
Set current address to all ones
All addresses within parameters set to all ones
No
Advance current address
CHEK
Check for main memory
Yes
Set up index count PAR
Clear current address
All addresses within parameters cleared
Yes
Exit
No
Advance current address
CHEK
Check for main memory

FLUSH1

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 732 | REVISION C

SPECIFICATION SYMBOL
SB-10163

TITLE: FLUSH - FLUSH CONTROL MEMORY, STOP, RECYCLE

DECK IDENTIFIER: FACT

CS-1 LABEL: FLUSH KEY: _____ IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 5

DESCRIPTION:

This routine, FLUSH, normalizes control memory, checks PROGRAM STOP 1 for the end of the Control Memory test, and checks PROGRAM SKIP 4 for recycle conditions.

This routine is entered from routine LCON

FLUSH return jumps to FLUSH1 to flush control memory, then checks PROGRAM STOP 1. If set, the Control Memory test is terminated. If not set, or upon restarting, PROGRAM SKIP 4 is checked. If set the Control Memory test is recycled without typeouts. If not set the Control Memory test is recycled with typeouts.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 733	REVISION —

SPECIFICATION SYMBOL
SP-10163

TITLE: FLUSH - FLUSH CONTROL MEMORY, STOP, RECYCLE

INPUT PARAMETERS (Listed Sequentially):

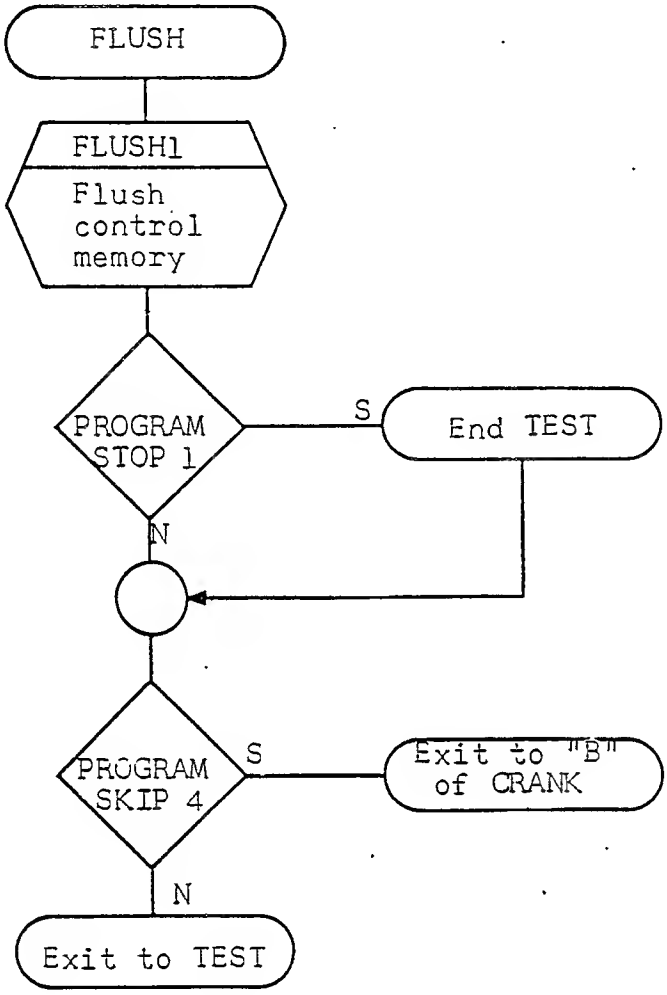
OUTPUT PARAMETERS (Listed Sequentially):

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):
FLUSH1
HEAD+6 in routine CRANK
TEST

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS:
PROGRAM STOP 1 - set for end of Control Memory test
PROGRAM SKIP 4 - set to recycle Control Memory test without typeouts
not set to recycle Control Memory test with typeouts


FLUSH
FLUSH1
Flush control memory
PROGRAM STOP 1
S
End TEST
N
PROGRAM SKIP 4
S
Exit to "B" of CRANK
N
Exit to TEST

FLUSH

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE

SHEET 735 REVISION

SPECIFICATION SYMBOL
CB-10163

TITLE: PAR - STORAGE, TEST PATTERNS

DECK IDENTIFIER: FACT

CS-1 LABEL: PAR KEY: IS LABEL DUPLICATE? No

PROGRAMMER: H W M modified by TLR DATE: 8 Dec. 67

NUMBER OF L_4 OUTPUT INSTRUCTIONS: 10

DESCRIPTION:

This program contains test patterns and storage for parameters used in the Control Memory test.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET

PROGRAM DATA PAGE (Cont)

SHEET 736 | REVISION

SPECIFICATION SYMBOL
SB-10163

TITLE: PAR - STORAGE, TEST PATTERNS

INPUT PARAMETERS (Listed Sequentially):

PAR
PAR1
DIP
DIP+1
HERE
THERE

OUTPUT PARAMETERS (Listed Sequentially):

ABNORMAL EXITS (Listed Sequentially):

NEXT LEVEL PROCEDURES OR SUBROUTINES (Keys of Duplicate Labels Specified):

SYSTEM DATA REFERENCES:

ALARMS AND/OR REMARKS: